# Precipitation

Sabi Horvat (Contact www.github.com/wpbsabi or www.twitter.com/tourofdata)

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Welcome to the Precipitation data overview

Have you wondered how you could get your hands on weather data to look into more detail than you could find on a wikipedia page? The US weather data source from the National Centers for Environmental Information can be used to lookup postal code data for weather analysis (https://www.climate.gov/maps-data/dataset/past-weather-zip-code-data-table).

In this analysis you'll find data wrangling, bar charts, line charts, box plots, and more analyses to truly understand the precipitation of a specific zipcode. The zipcode used in the plots below contains the Portland, Oregon airport PDX.
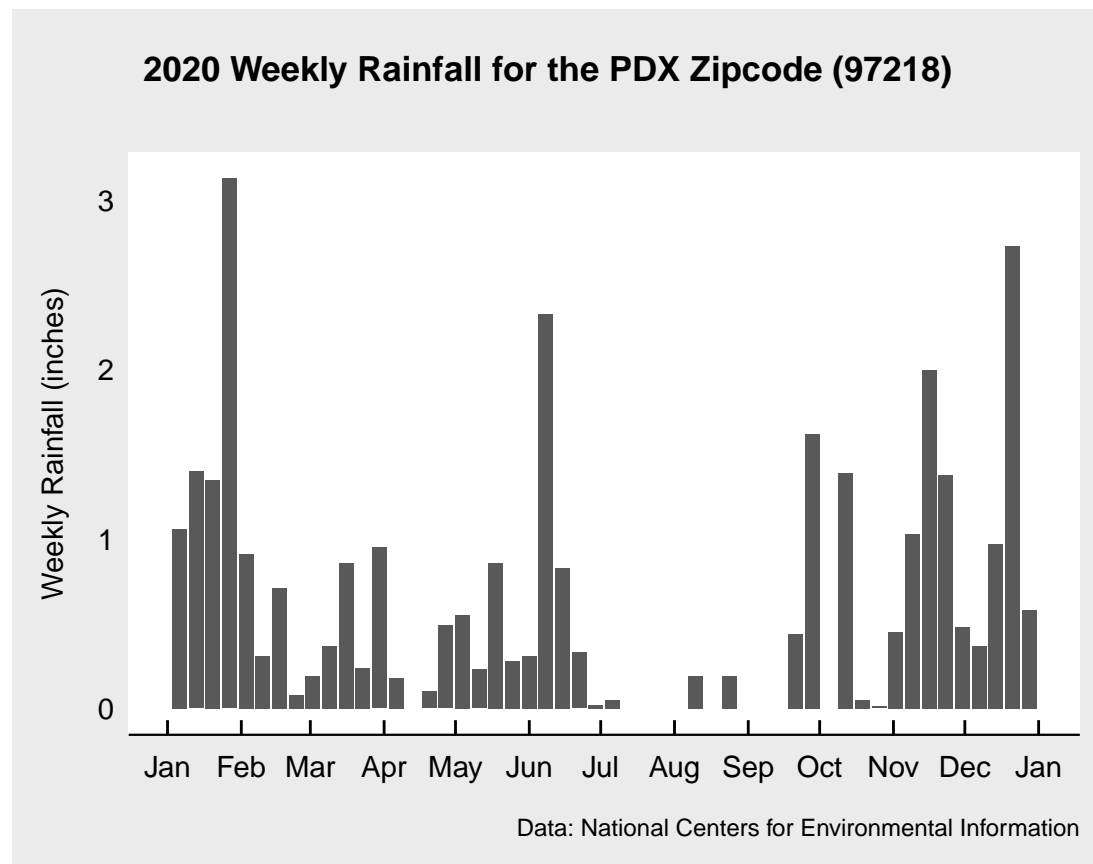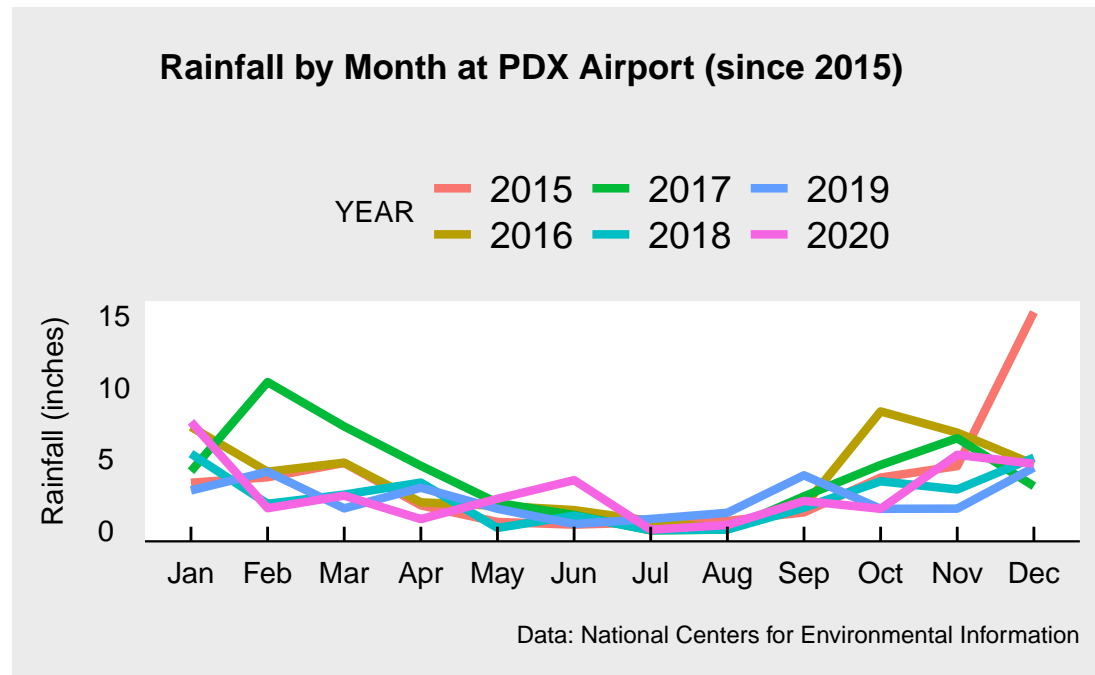
Daily and weekly rainfall is interesting to inspect, but the monthly accumulation data is cleaner to view.

2020 Monthly Rainfall for PDX Airport

Data: National Centers for Environmental Information
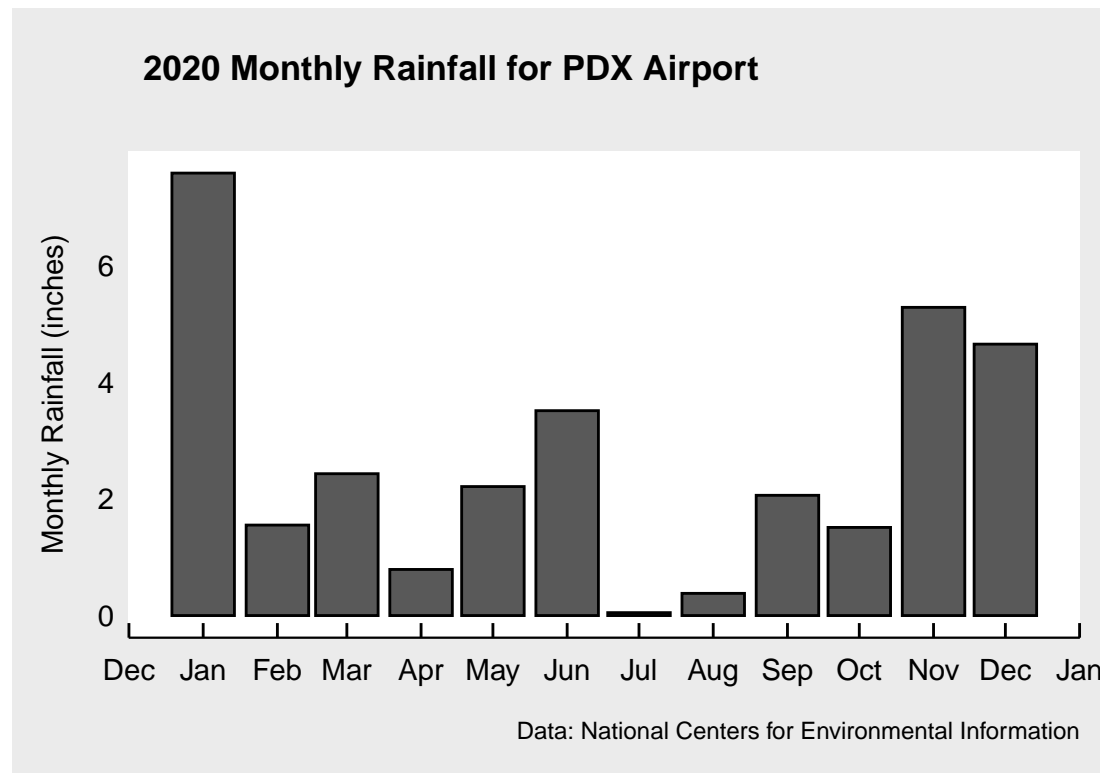
The 80 year average was similar to the 60, 40, or 20 year average. The 80 year average box plot is displayed since the additional data showcases additional outliers.

Rainfall by Month at PDX Airport (since 1941)

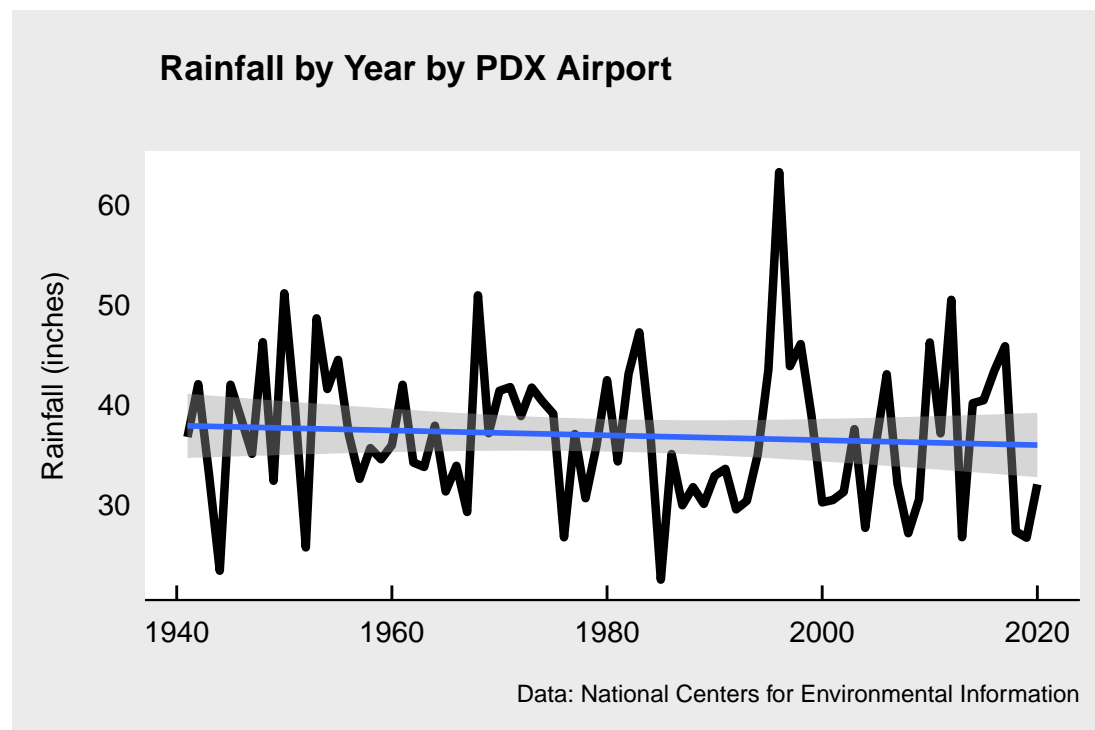Data: National Centers for Environmental Information
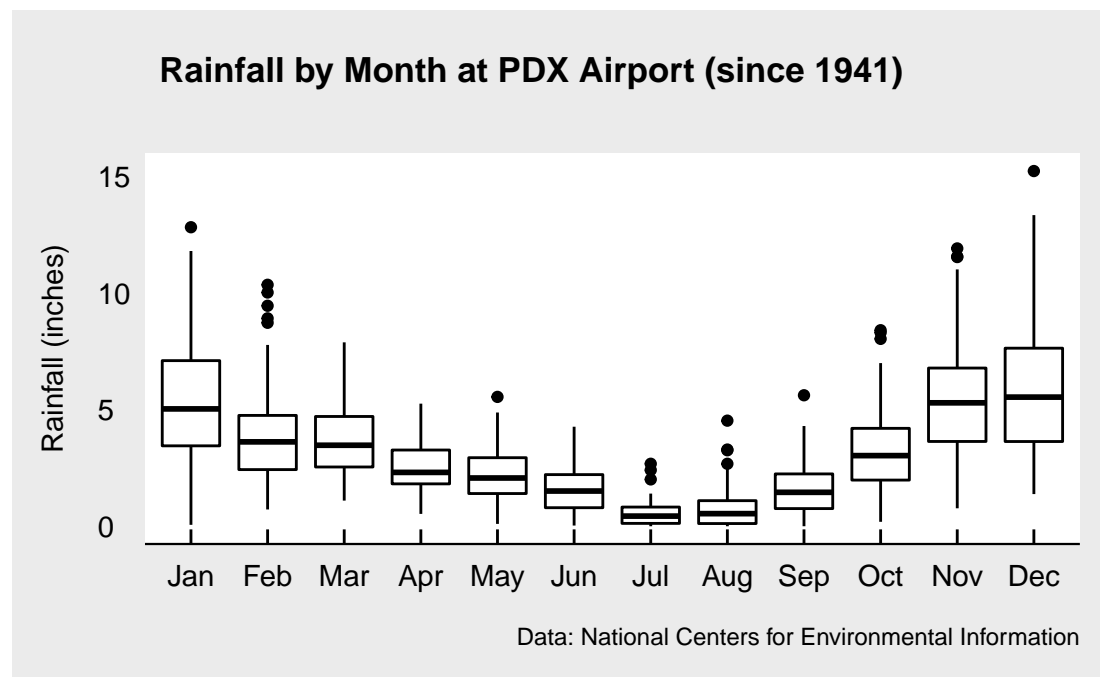
The following chart of the last six years of precipitation rekindles memories. I moved to Oregon in 2015 to witness record rainfall in December my first year, once again in October the next year, and then the third year started off with a very rainy February. Farmers and gardeners struggled with the saturated soils which weren't ready for planting until later than usual.

Rainfall by Month at PDX Airport (since 2015)

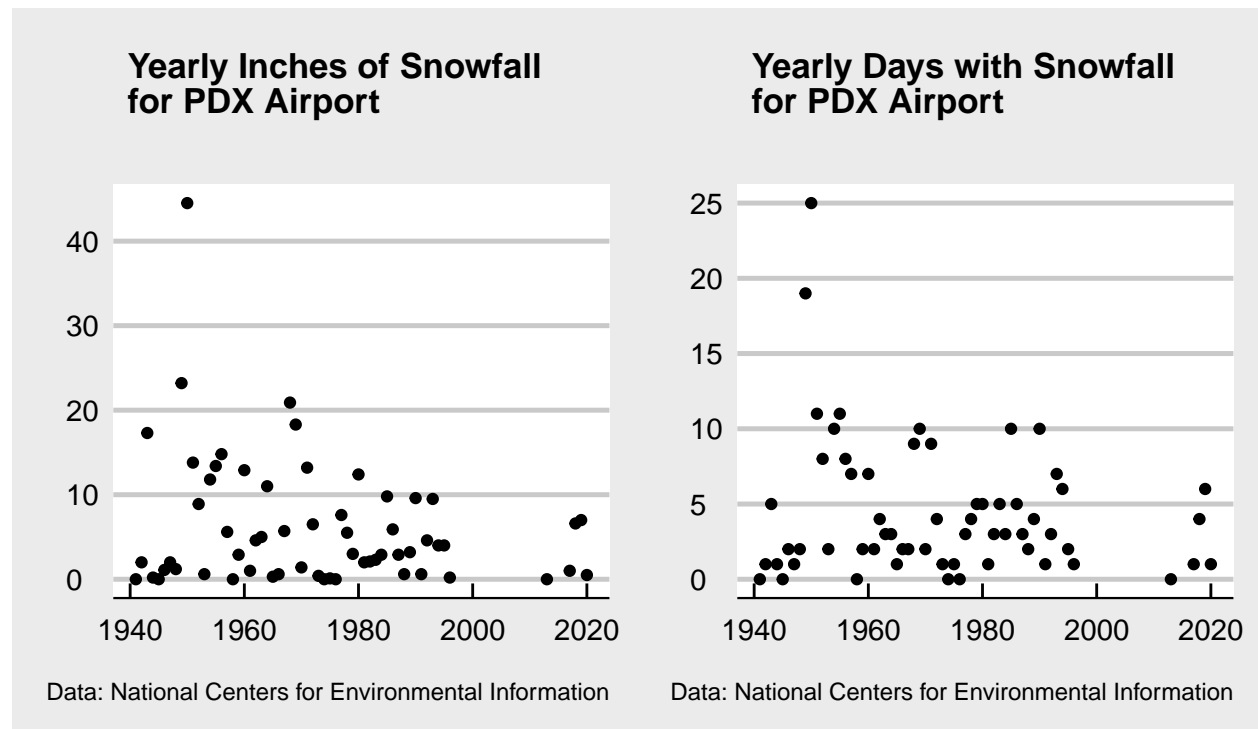Data: National Centers for Environmental Information

The yearly rainfall is decreasing slightly, but the number of data points are not enough for me to claim that this decrease is indicative of a long term trend.

```
## `geom_smooth()` using formula 'y ~ x'
```

Rainfall by Year by PDX Airport

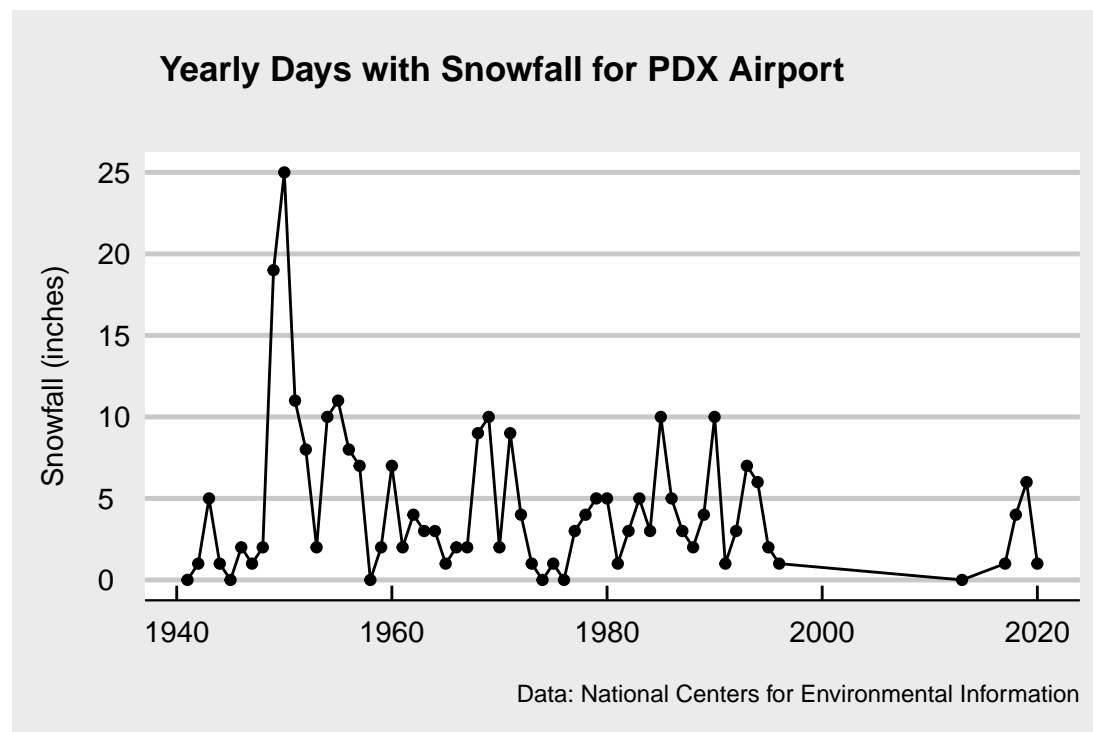Data: National Centers for Environmental Information

Snowfall is a less common story in the PDX area, especially in the last 20 years.

While snow depth data exists in addition to snowfall data, the snow depth data was very similar to the snowfall data for this zipcode. Snow depth may be a more interesting topic in other climates.

Yearly Inches of Snowfall for PDX Airport

Data: National Centers for Environmental Information

Yearly Days with Snowfall for PDX Airport

Data: National Centers for Environmental Information

Inches of snowfall tells a greater story than days with snowfall

Yearly Days with Snowfall for PDX Airport

Snowfall (inches)

Data: National Centers for Environmental Information

The record snowfall in one day was 14.4 inches on January 21st, 1943. That was the only recording of more snow than 10 inches of snowfall in one day. The record year of snowfall in 1950 was due to a very white January and February.

Which months have seen snowfall since recording began?

Month	Number of years with snow	Percent of years that it snowed
January	29	47.5%
February	21	34.4%
March	14	23.0%
May	1	1.6%
October	1	1.6%
November	6	9.8%
December	24	39.3%

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this: