

Washington County, UT PM2.5 Analysis

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This is Anna Burns' preliminary analysis of particulate matter 2.5 levels in Washington County, Utah.

```
WaCoPM25 = rbind(Burns_WashCoUt_AQ, Burns_WaCoPM25_2019, Burns_WaCoPM25_2018)
```

```
#fixing dates
```

```
Date.char = as.character(WaCoPM25$Date)
```

```
WaCoPM25$Date = as.Date(Date.char, format="%m/%d/%Y")
```

```
#fixing names
```

```
names(WaCoPM25)[names(WaCoPM25) == "Daily Mean PM2.5 Concentration"] <- "PM25"
```

```
plot(PM25~Date, data=WaCoPM25, main="PM 2.5 Concentration in Washington County, UT", sub="1 January, 20
```

```
fitPM <- lm(PM25~Date, data=WaCoPM25)
```

```
summary(fitPM)
```

```
##
```

```
## Call:
```

```
## lm(formula = PM25 ~ Date, data = WaCoPM25)
```

```
##
```

```
## Residuals:
```

```
##      Min       1Q   Median       3Q      Max
```

```
## -6.9433 -2.0967 -0.5996  1.0176 23.0856
```

```
##
```

```
## Coefficients:
```

```
##              Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept) -9.3289392  6.9267686  -1.347  0.1784
```

```
## Date         0.0008002  0.0003840   2.084  0.0375 *
```

```
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
```

```
## Residual standard error: 3.367 on 892 degrees of freedom
```

```
## Multiple R-squared:  0.004843, Adjusted R-squared:  0.003728
```

```
## F-statistic: 4.341 on 1 and 892 DF, p-value: 0.03748
```

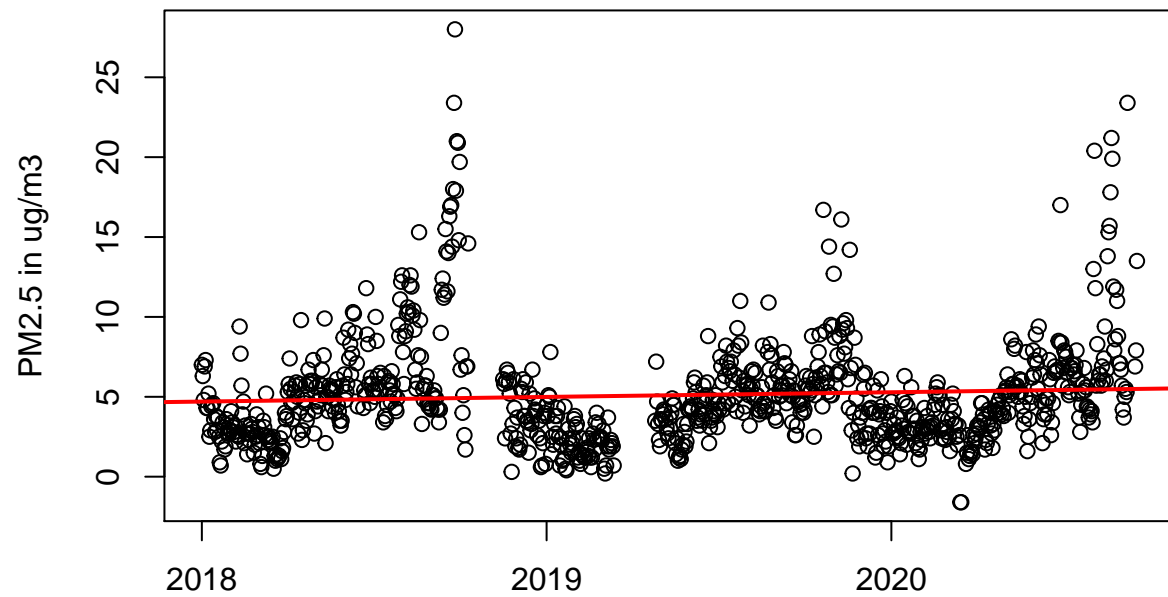
```
coef(fitPM)
```

```
##      (Intercept)          Date
```

```
## -9.3289391601  0.0008001877
```

```
abline(coef(fitPM), col = "red", lwd = 2)
```

PM 2.5 Concentration in Washington County, UT



Date
1 January, 2018 to 5 October, 2020