

Buffalo Analysis

Normality Test (Kolmogorov-Smirnov Test)

The Kolmogorov-Smirnov test was performed for each period to test normality.

Period 1: p-value > 0.05

Period 2: p-value > 0.05

Period 3: p-value > 0.05

Since all p-values are greater than 0.05, we fail to reject the null hypothesis.

This means precipitation in Buffalo is approximately normally distributed for all periods.

ANOVA Test

A one-way ANOVA was performed to test whether mean precipitation differs among periods.

ANOVA p-value = 0.02636

Since $p < 0.05$, we reject the null hypothesis.

This means there is a significant difference in mean precipitation between periods in Buffalo.

Kruskal-Wallis Test

The Kruskal-Wallis test was also performed.

p-value = 0.03095

Since $p < 0.05$, we reject the null hypothesis.

This confirms that precipitation differs across periods.

Median Test

The median test was conducted using a chi-square test.

p-value = 0.7401

Since $p > 0.05$, we fail to reject the null hypothesis.

There is no significant difference in median precipitation between periods.

San Diego Analysis

Normality Test (Kolmogorov-Smirnov Test)

The KS test results:

Period 1: p-value > 0.05

Period 2: p-value > 0.05

Period 3: p-value > 0.05

All periods appear approximately normal.

ANOVA Test

ANOVA p-value = 0.9677

Since $p > 0.05$, we fail to reject the null hypothesis.

There is no significant difference in mean precipitation between periods.

Kruskal-Wallis Test

p-value = 0.7362

Since $p > 0.05$, there is no significant difference between periods.

Median Test

The chi-square test shows:

p-value > 0.05

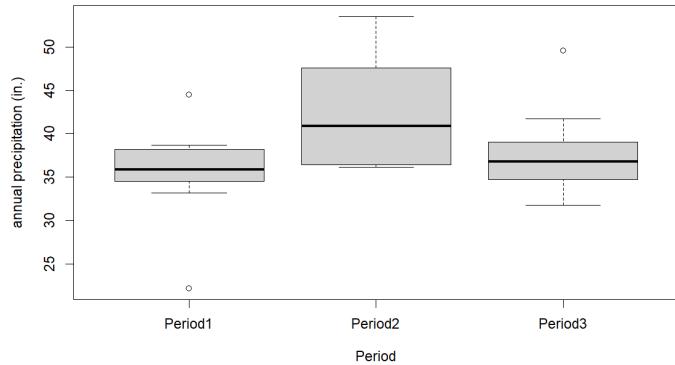
There is no significant difference in median precipitation between periods.

Final Conclusion

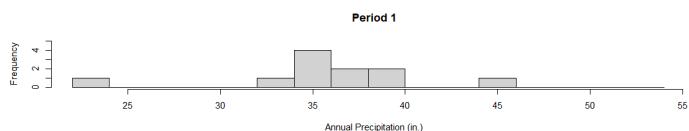
For Buffalo, precipitation shows significant differences between periods based on ANOVA and Kruskal-Wallis tests.

For San Diego, precipitation does not show significant differences between periods.

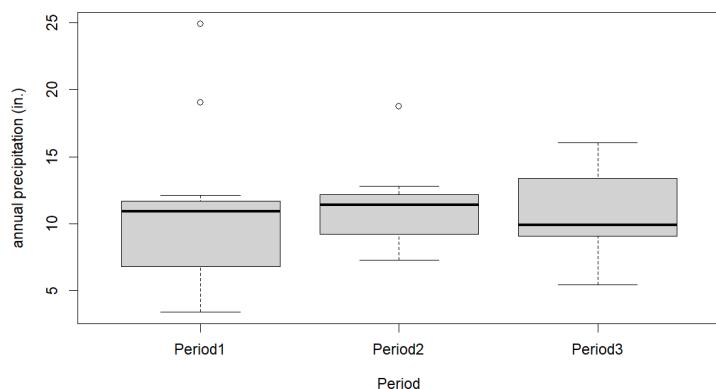
Buff box plot



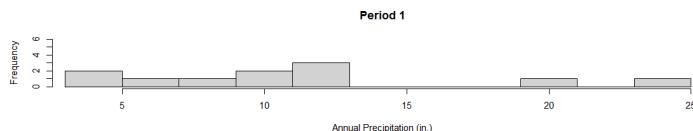
Buff Hist



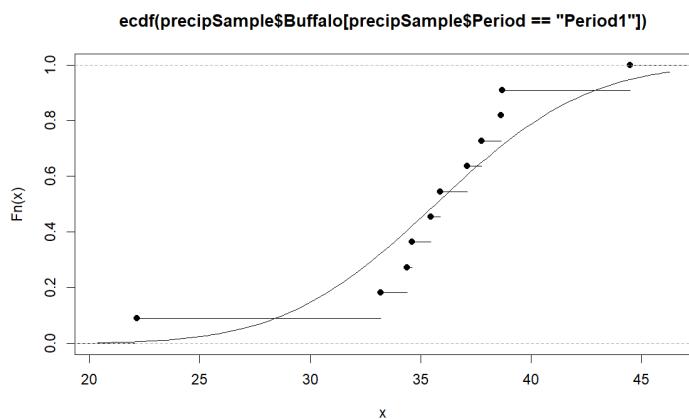
SanD box plot



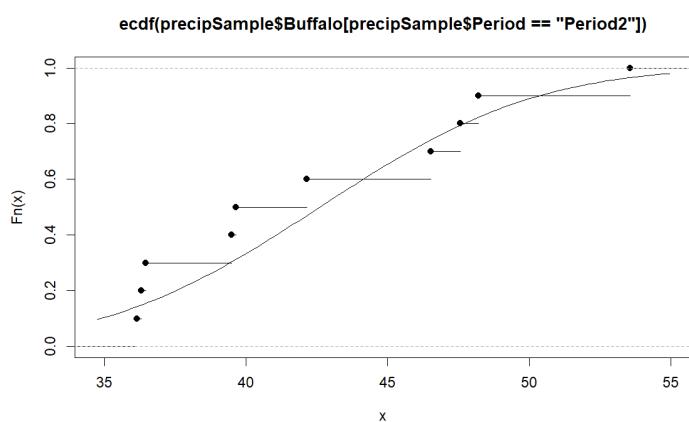
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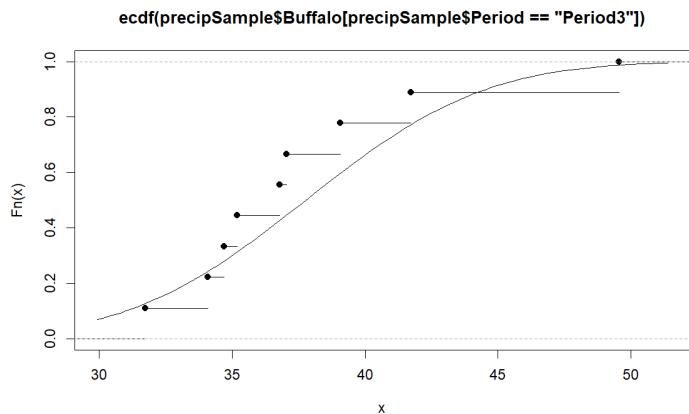
Buff KS test period 1



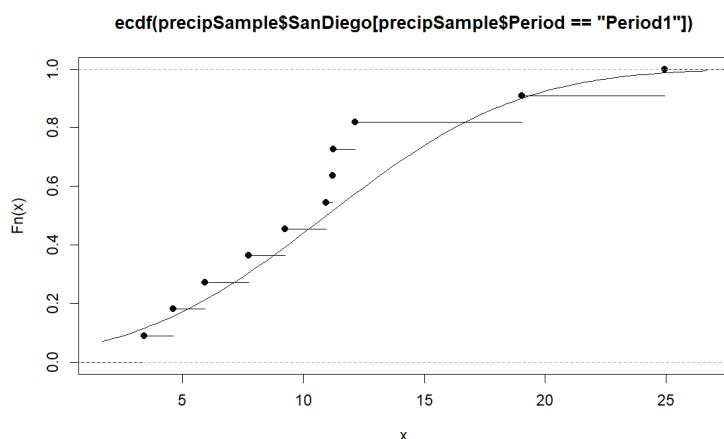
Buff KS test period 2



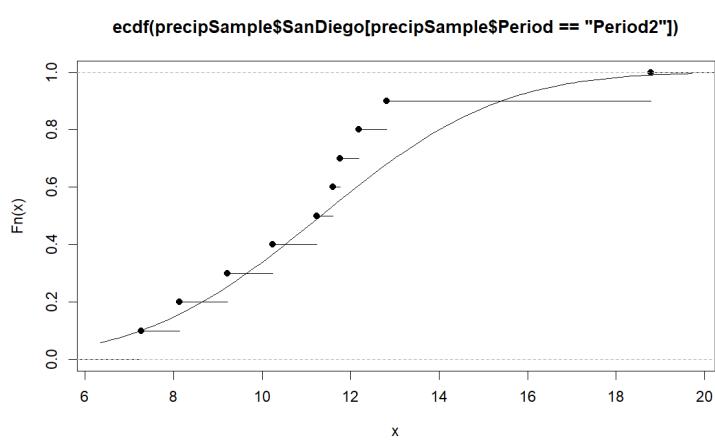
Buff KS test period 3



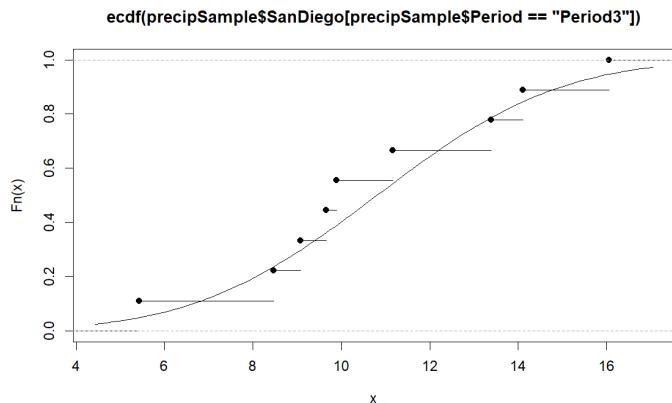
SanD KS test period 1



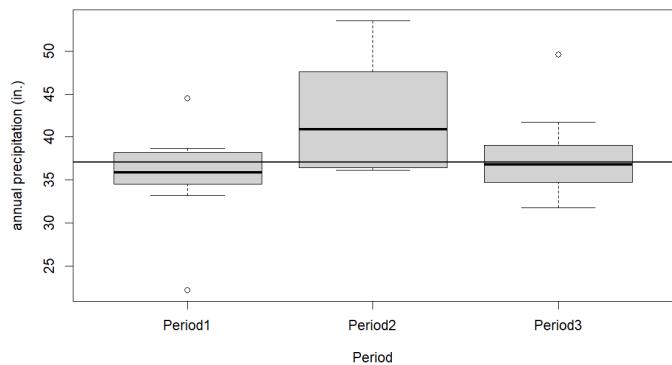
SanD KS test period 2



SanD KS test period 3



Buff Median box plot



SanD Median box plot

