**Question: Do AgNPs have an effect on yellow perch N, P and C excretion?**

**Answer: AgNPs increase N excretion, decrease DOC excretion, and have no effect on P excretion. Tag release also decreases with time from first year of AgNPs addition**

# Anova: Log TDN excretion ~ Lake

summary(aov.N)

Df Sum Sq Mean Sq F value Pr(>F)

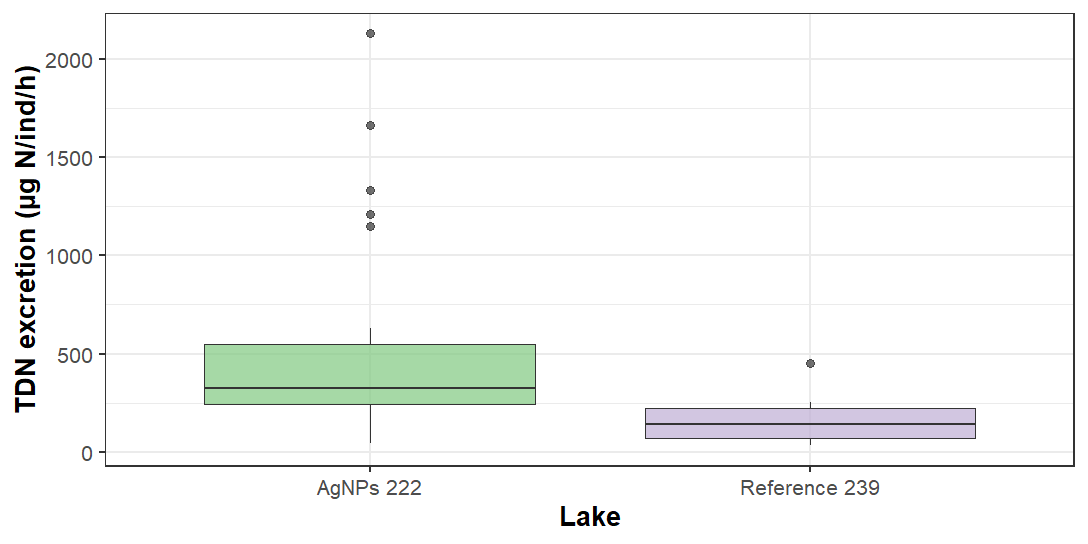
Lake 1 7.921 7.921 10.27 0.0032 \*\*

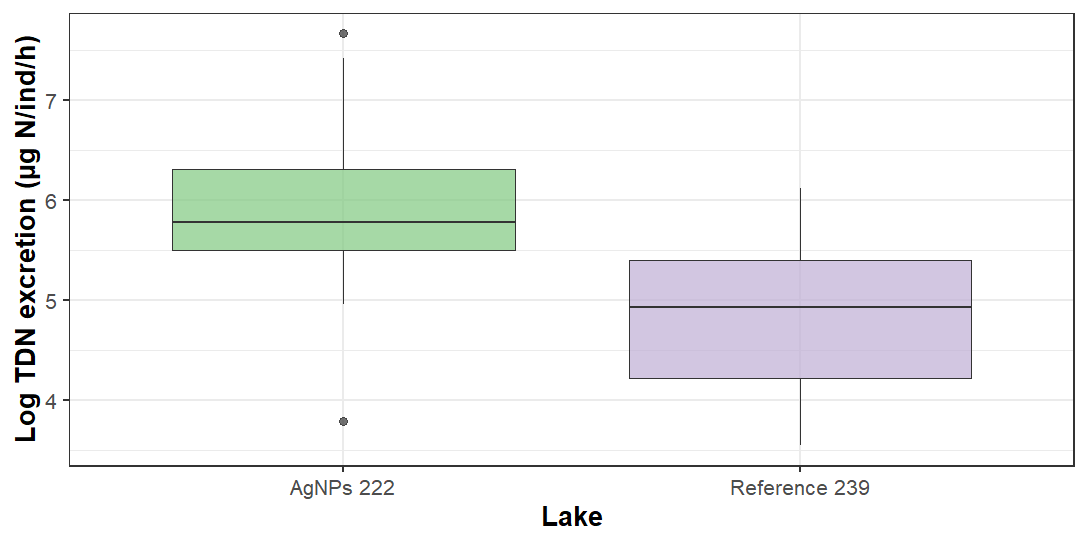
Residuals 30 23.135 0.771

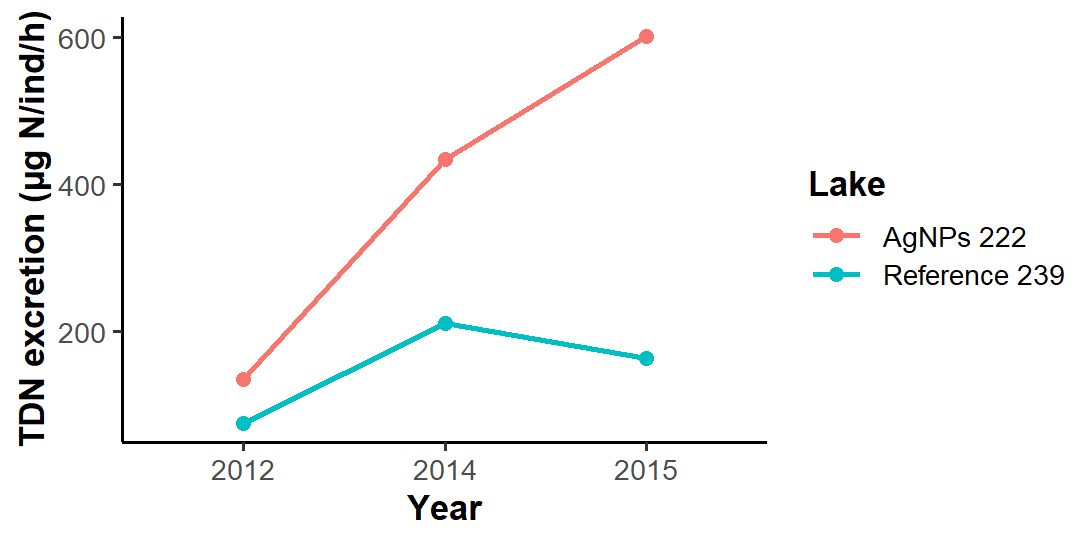
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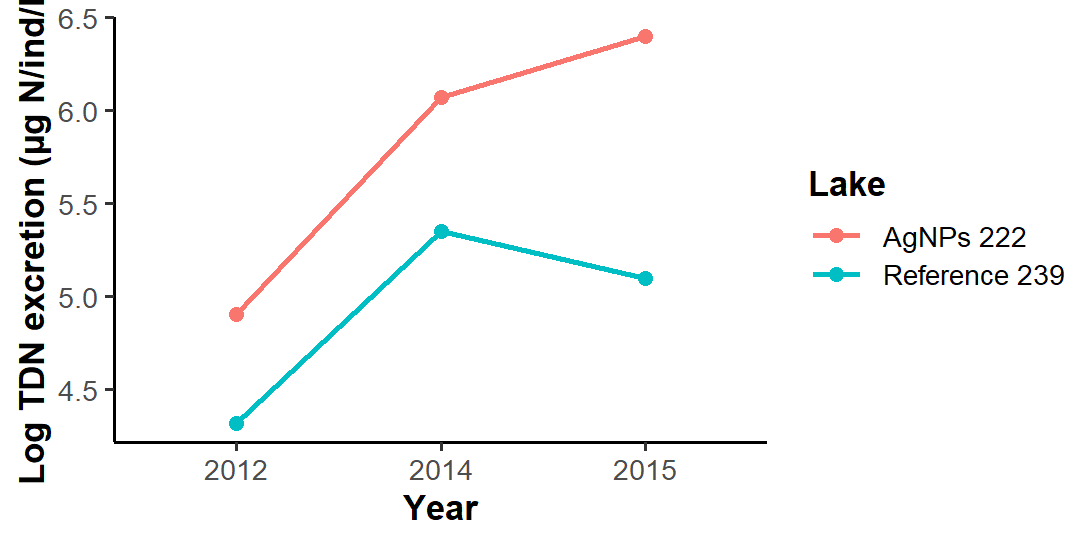
Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

68 observations deleted due to missingness









# Anova: TDP excretion ~ Lake

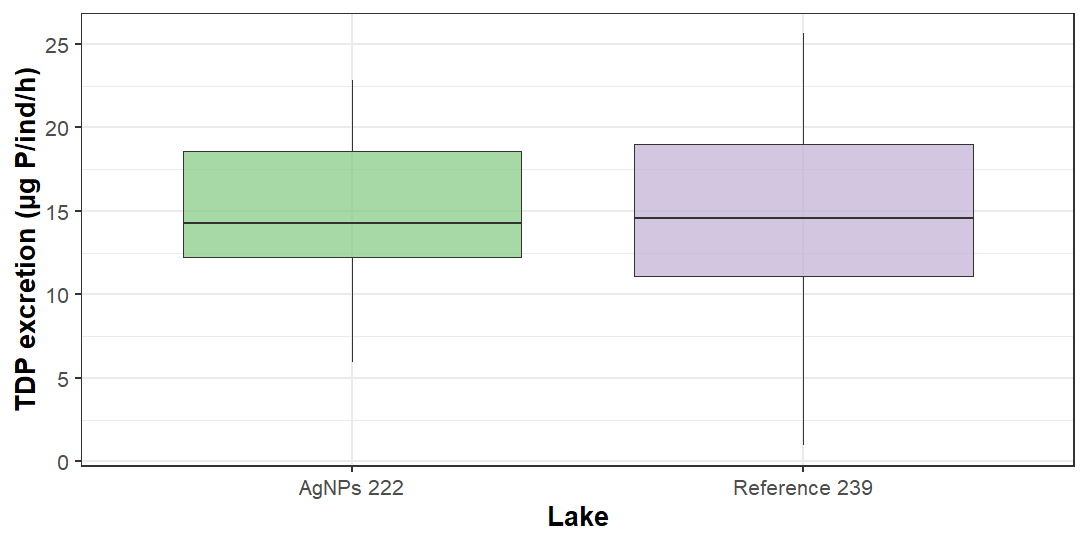
summary(aov.Pnx)

Df Sum Sq Mean Sq F value Pr(>F)

Lake 1 0.5 0.501 0.019 0.892

Residuals 76 2048.0 26.948

22 observations deleted due to missingness



# Anova: TDP excretion ~ Lake\*Year

summary(aov.Px)

Df Sum Sq Mean Sq F value Pr(>F)

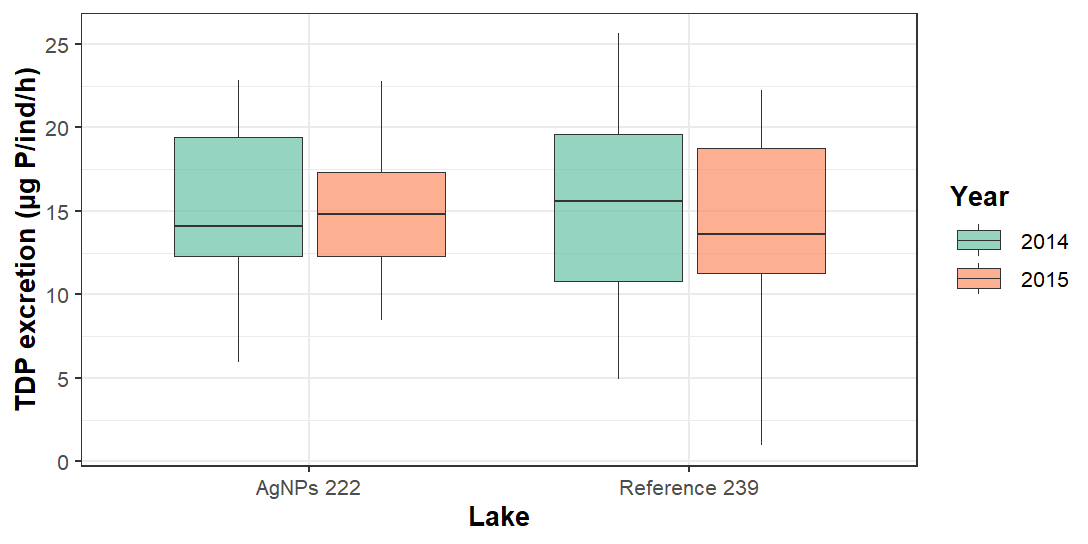
Lake 1 0.5 0.501 0.018 0.893

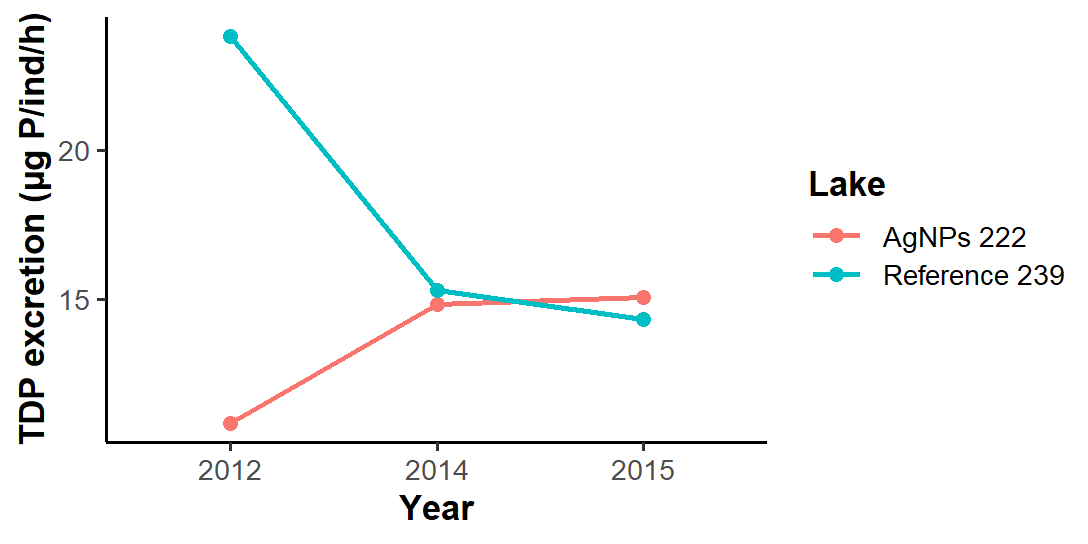
Year 1 2.8 2.825 0.103 0.750

Lake:Year 1 7.2 7.163 0.260 0.612

Residuals 74 2038.0 27.541

22 observations deleted due to missingness





# Anova: DOC excretion ~ Lake

summary(aov.C)

Df Sum Sq Mean Sq F value Pr(>F)

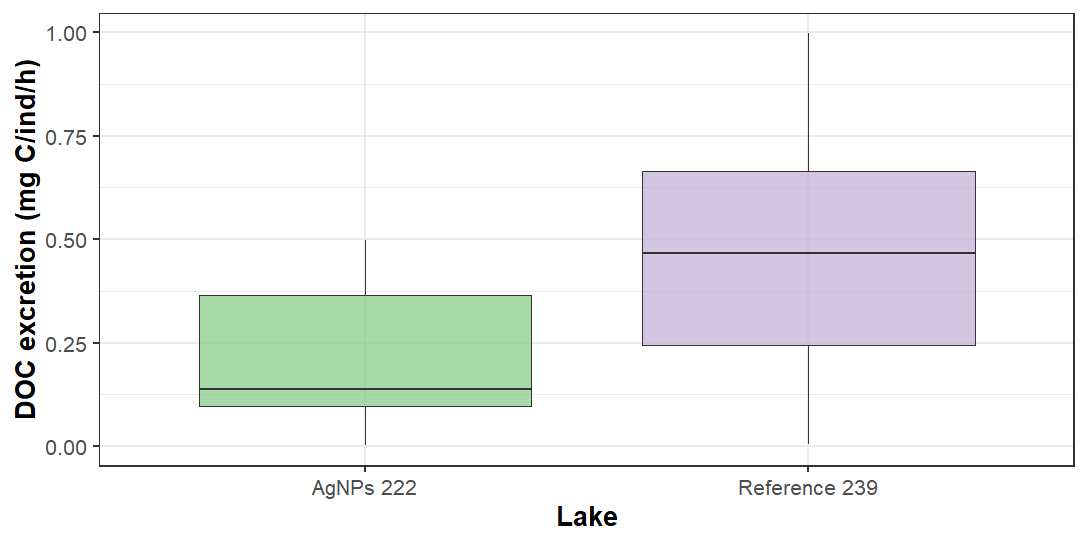
Lake 1 0.2811 0.28111 4.41 0.0493 \*

Residuals 19 1.2112 0.06375

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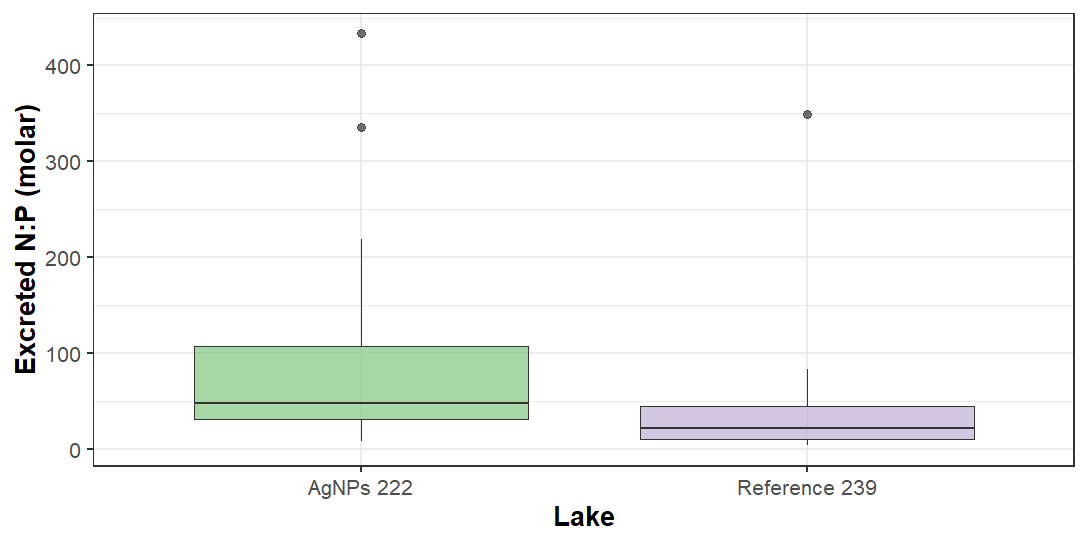
Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

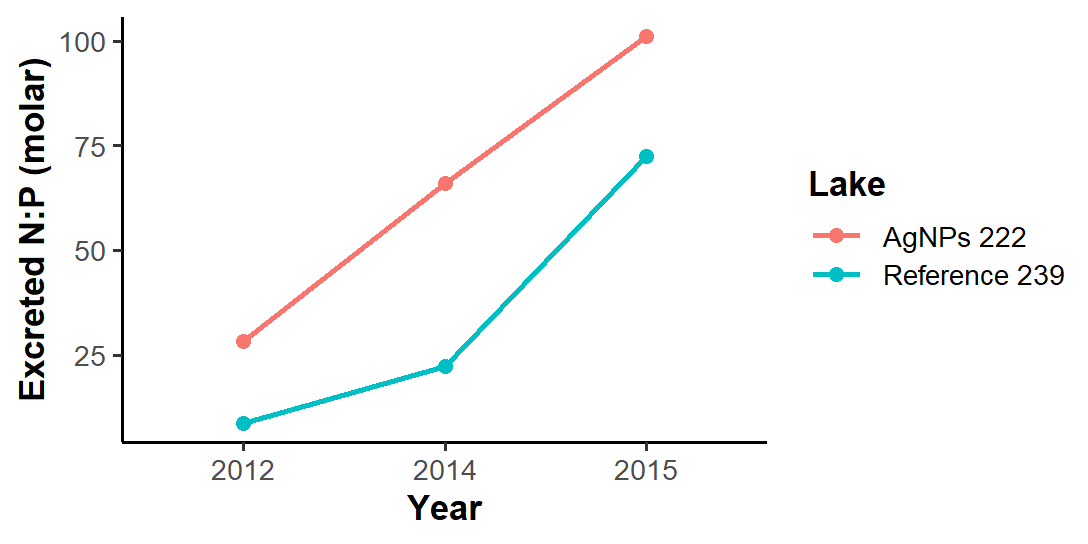
79 observations deleted due to missingness



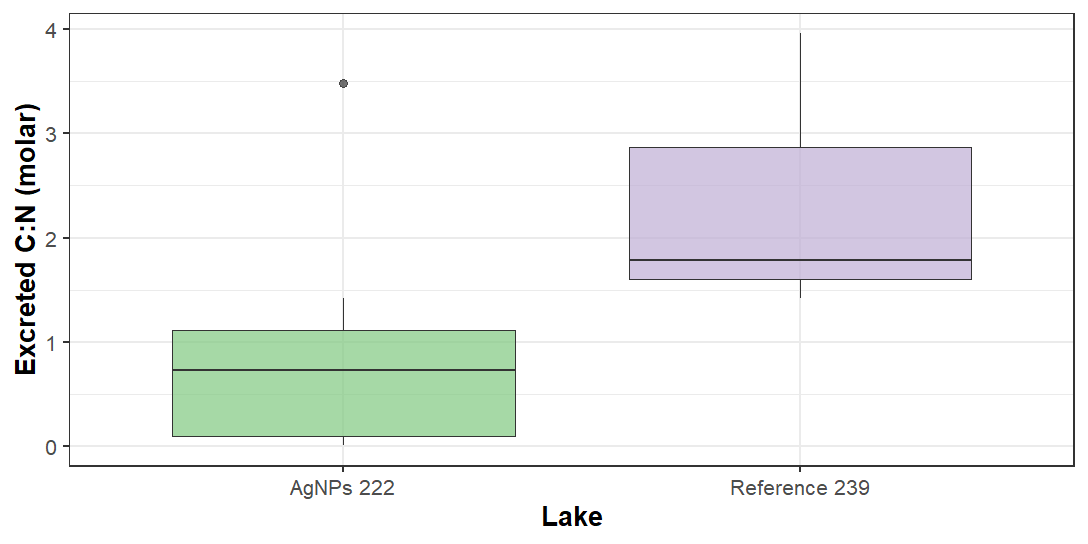
*Note: very low DOC excretion for both lakes*

# Excreted N:P ~ Lake





# Excreted C:N ~ Lake



*Note: very low DOC excretion for both lakes*

# Anova: Log Tag excretion ~ Year

summary(aov.Tag)

Df Sum Sq Mean Sq F value Pr(>F)

Year 1 5.48 5.480 13.5 0.00077 \*\*\*

Residuals 36 14.61 0.406

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

62 observations deleted due to missingness

