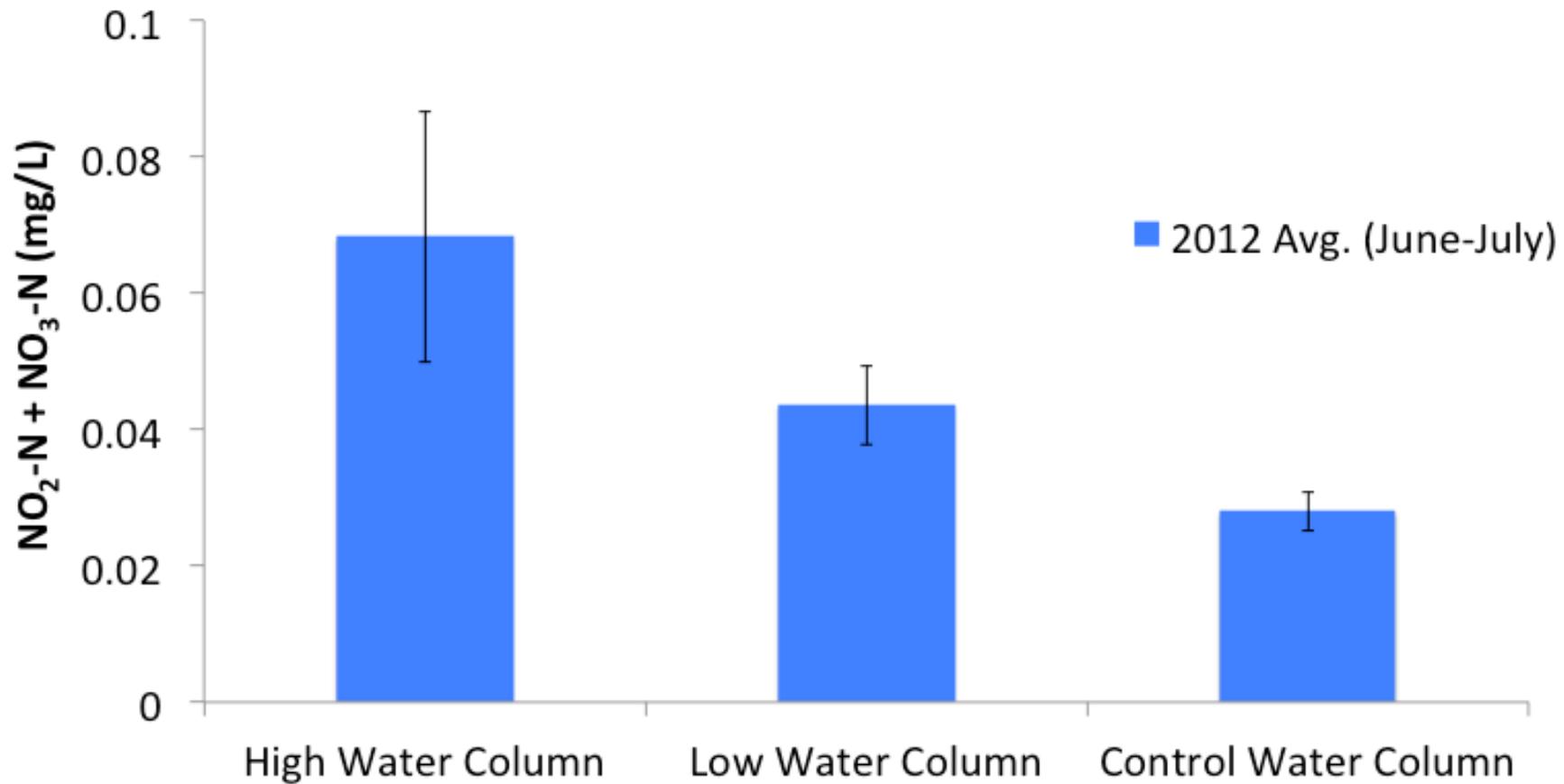


# Willard Spur Nutrient Cycling Part II: Nutrient Release Rates and Comparison to PWRWTP Loads

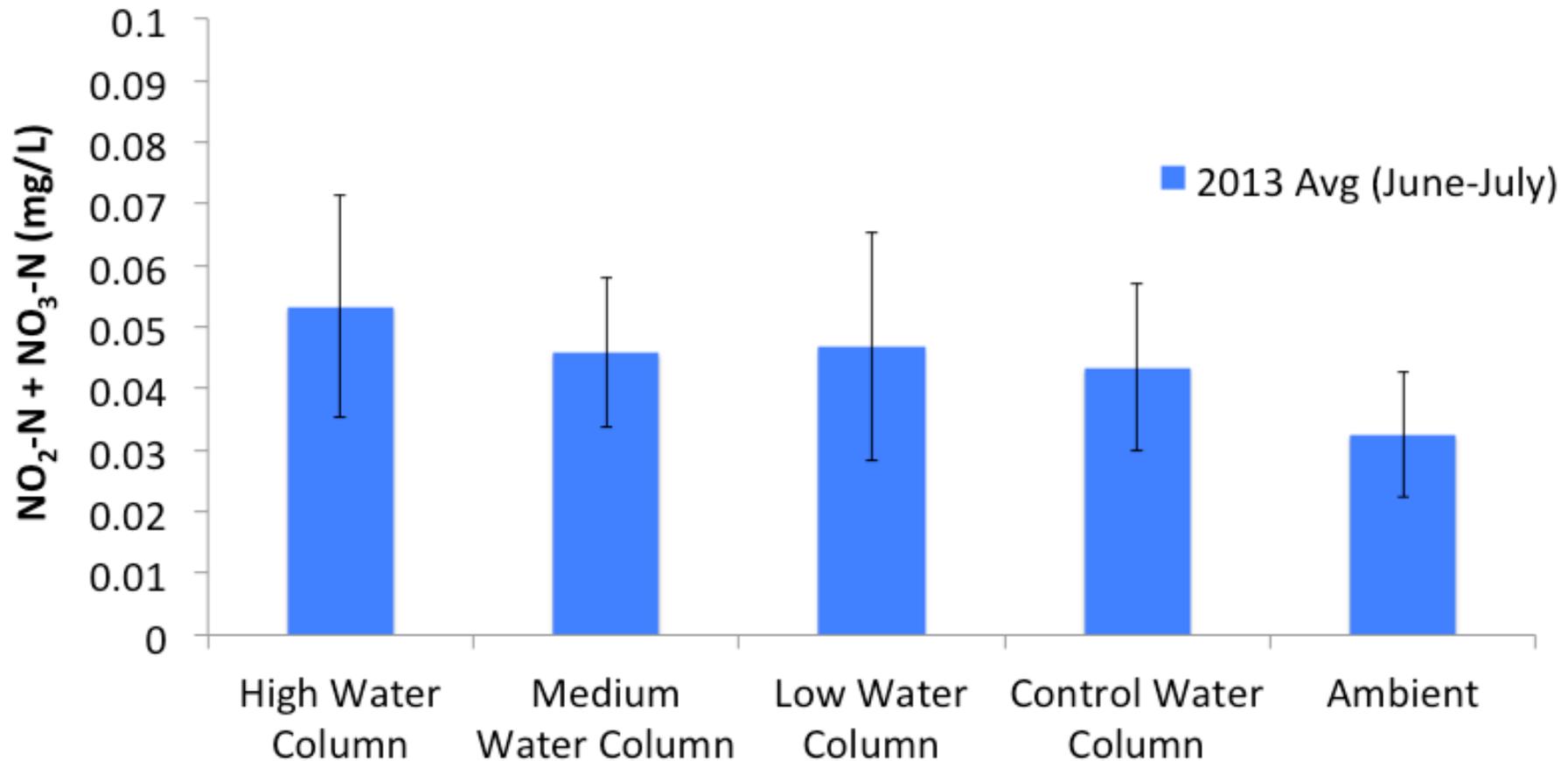


Heidi Hoven, William Johnson, David Richards, Ramesh Goel,  
Sam Rushforth, Sarah Rushforth, Joel Pierson, Mitch Hogsett

# 2012 Dissolved $\text{NO}_2\text{-N}$ + $\text{NO}_3\text{-N}$

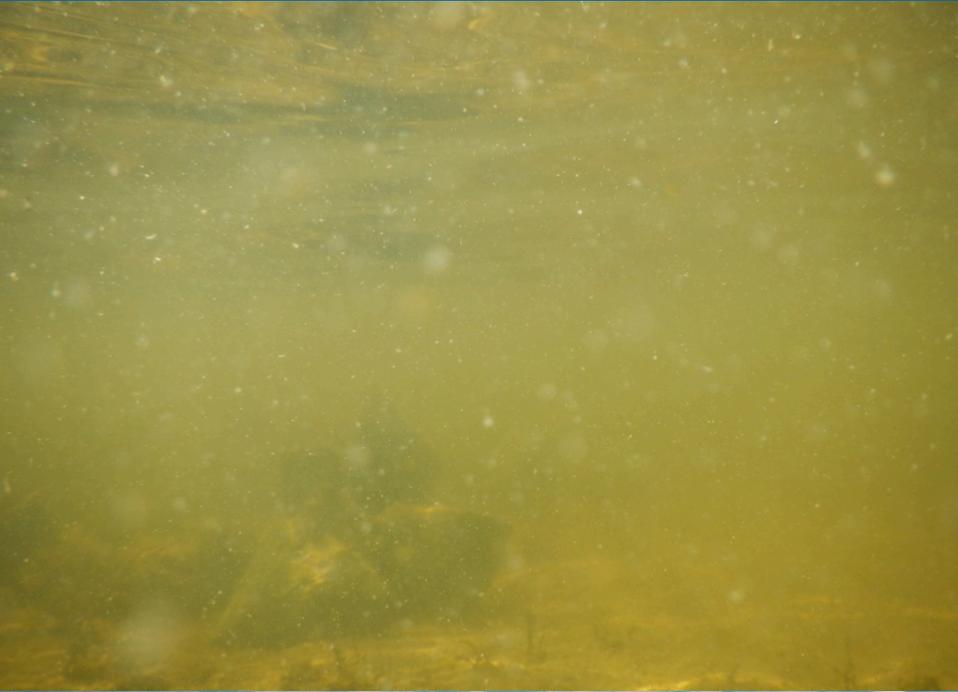


# 2013 Dissolved $\text{NO}_2\text{-N}$ + $\text{NO}_3\text{-N}$



# 2013 SAV Response to Nutrient Amendments

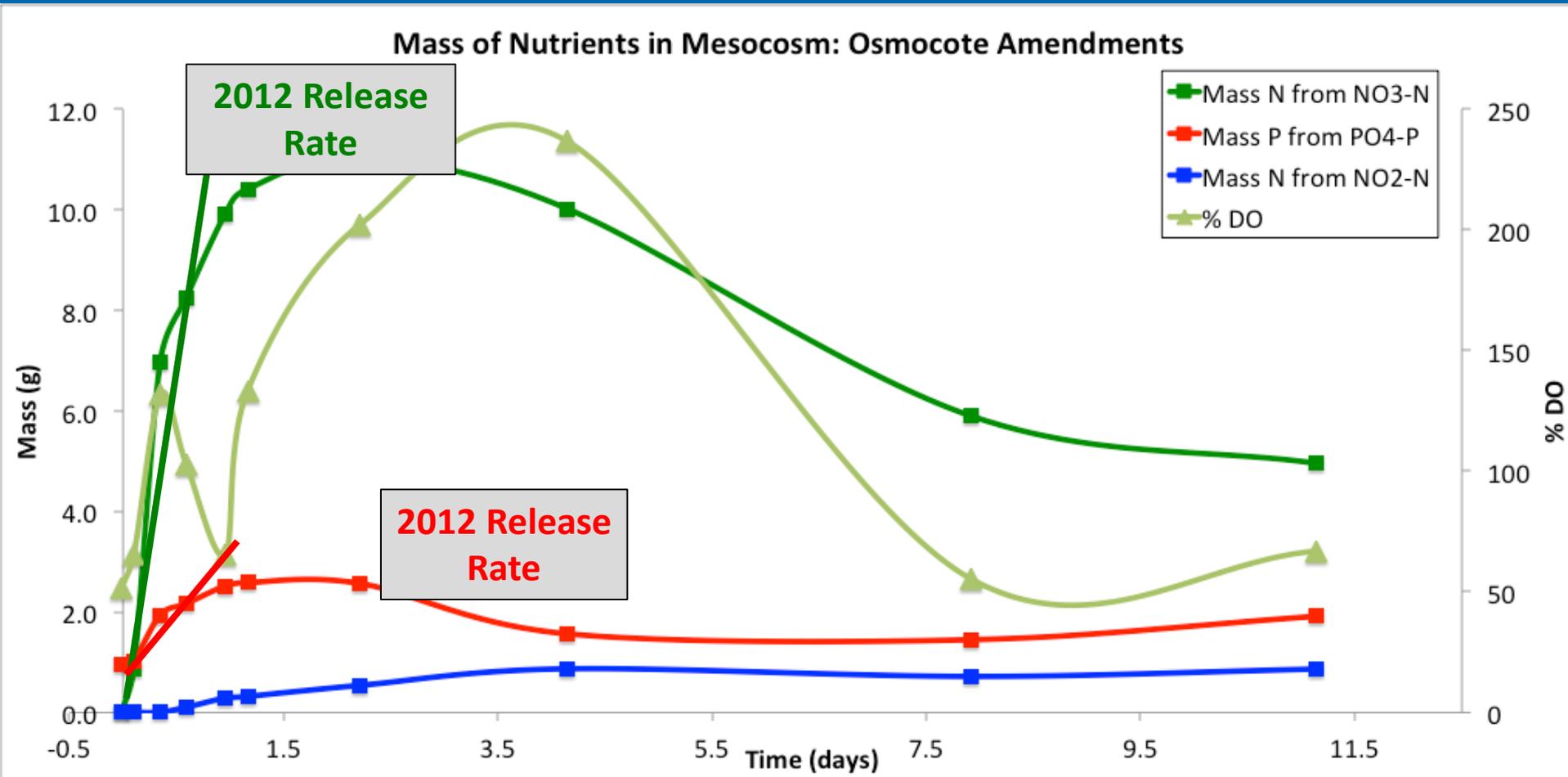
**High Plot  
Starboard (Inside the Plot)**



**High Plot  
Port (Outside the Plot)**

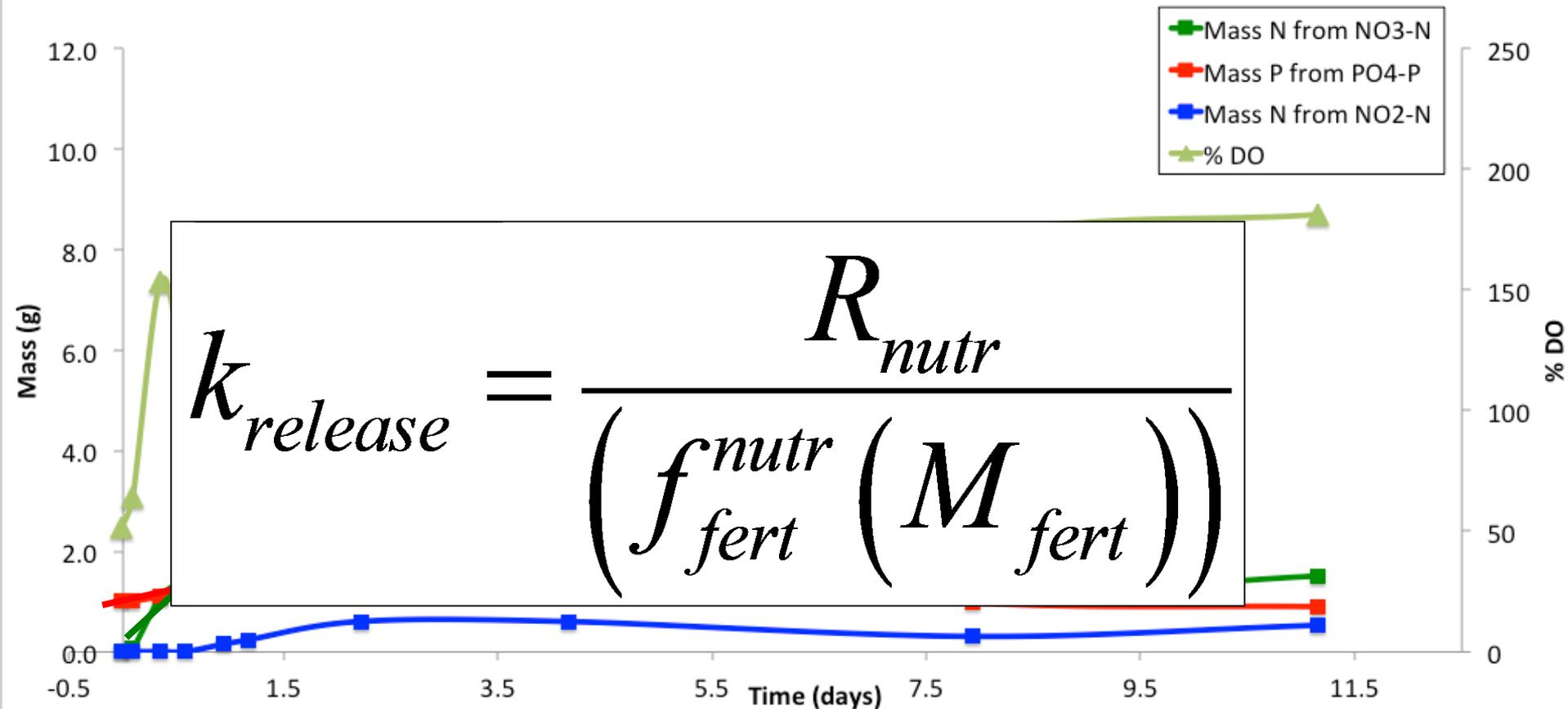


# Mesocosm Tests: 2012 Osmocote

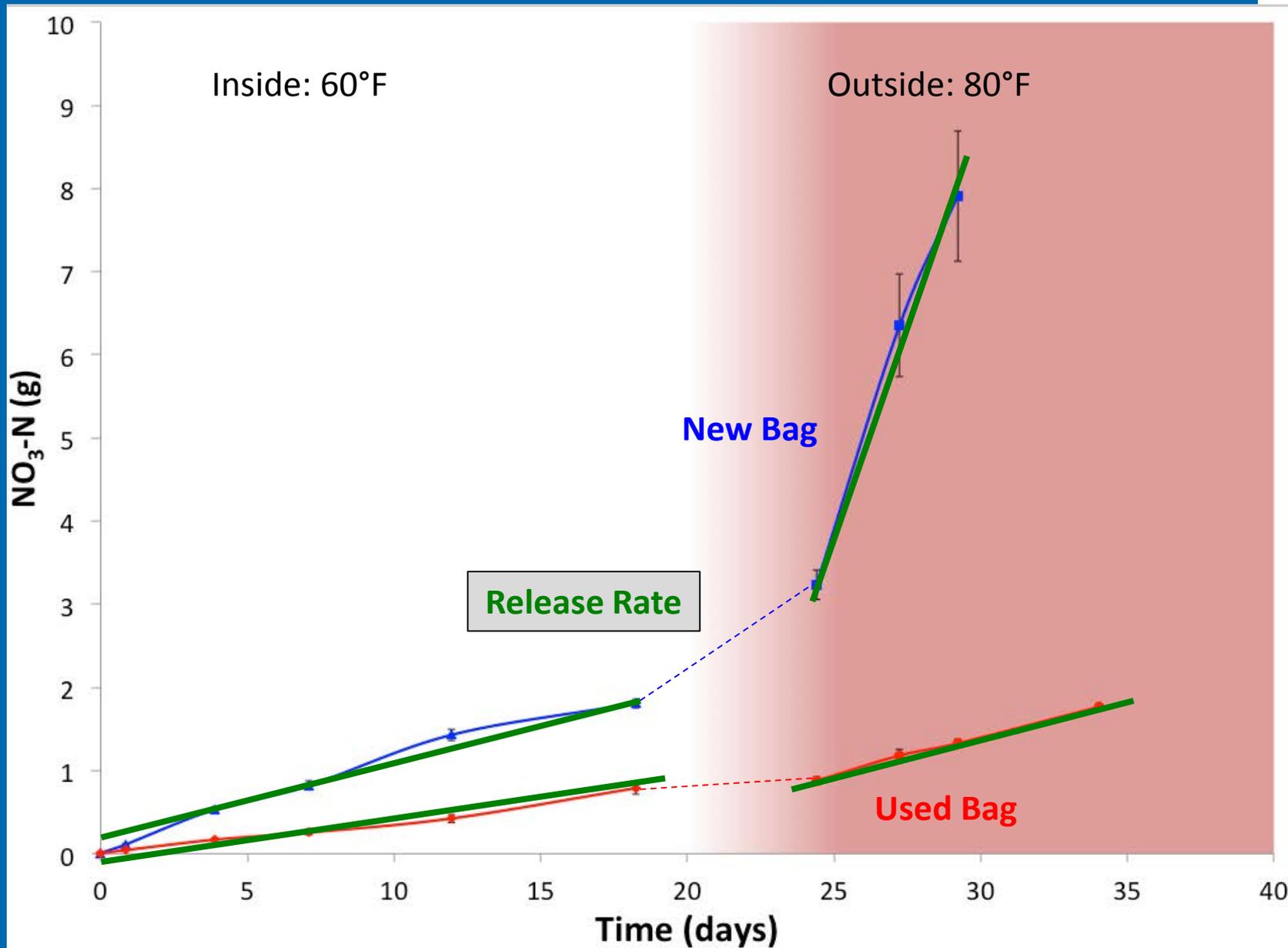


# Mesocosm Tests: 2013 Osmocote + Urea

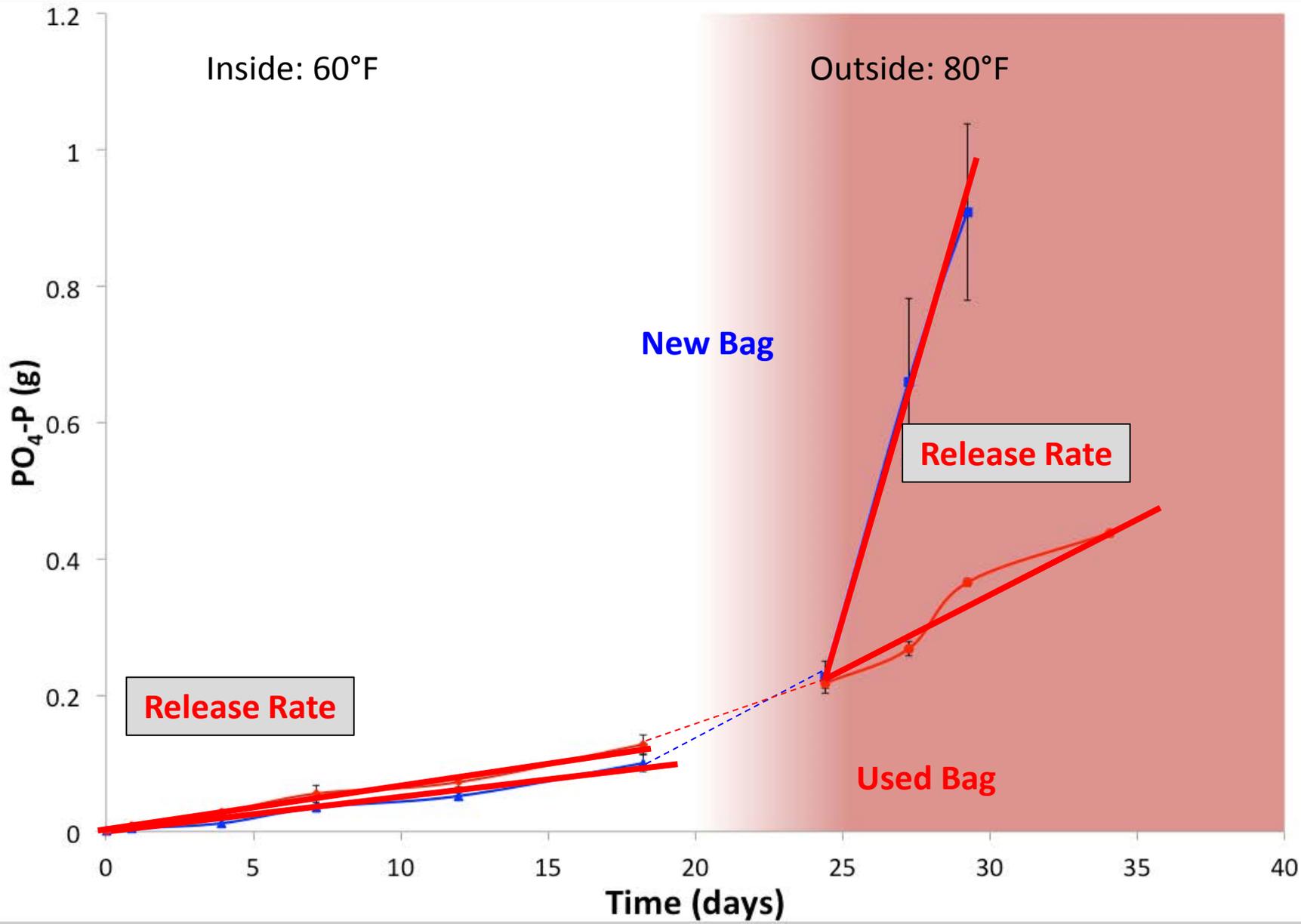
Mass of Nutrients in Mesocosm: 2013 Mix Amendments



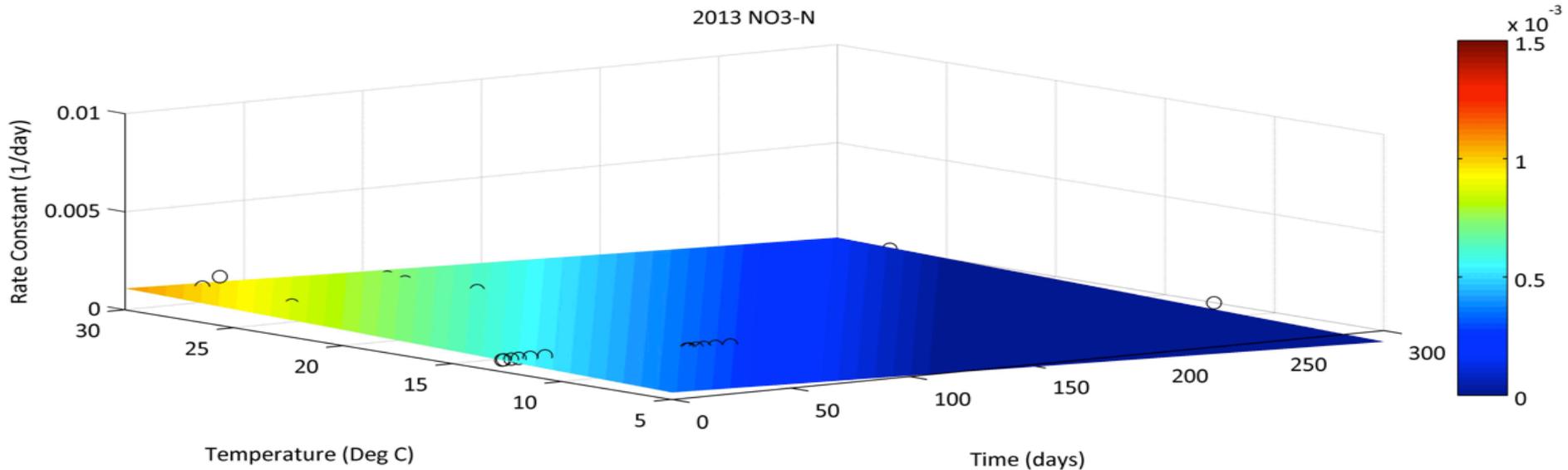
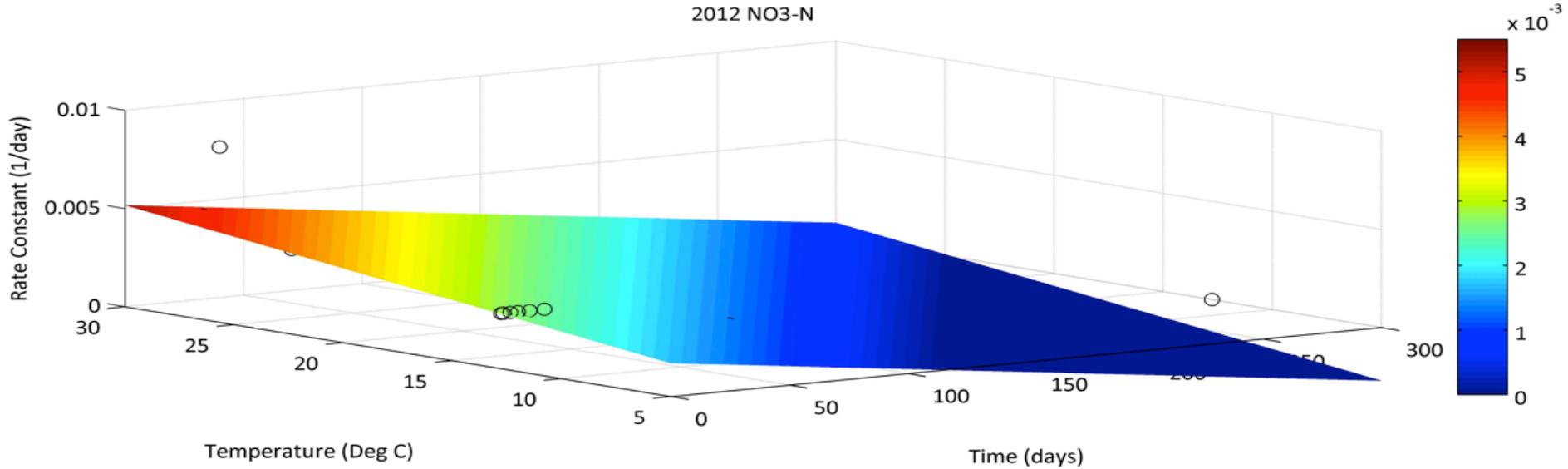
# 2012 Osmocote Bucket Tests: NO<sub>3</sub>-N



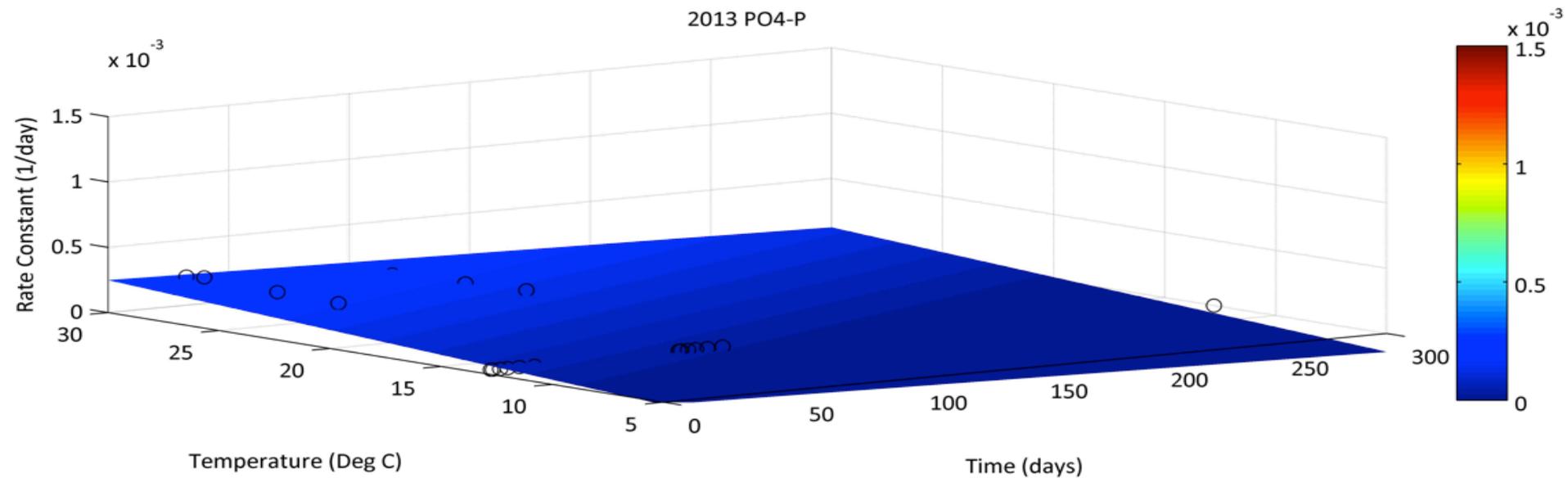
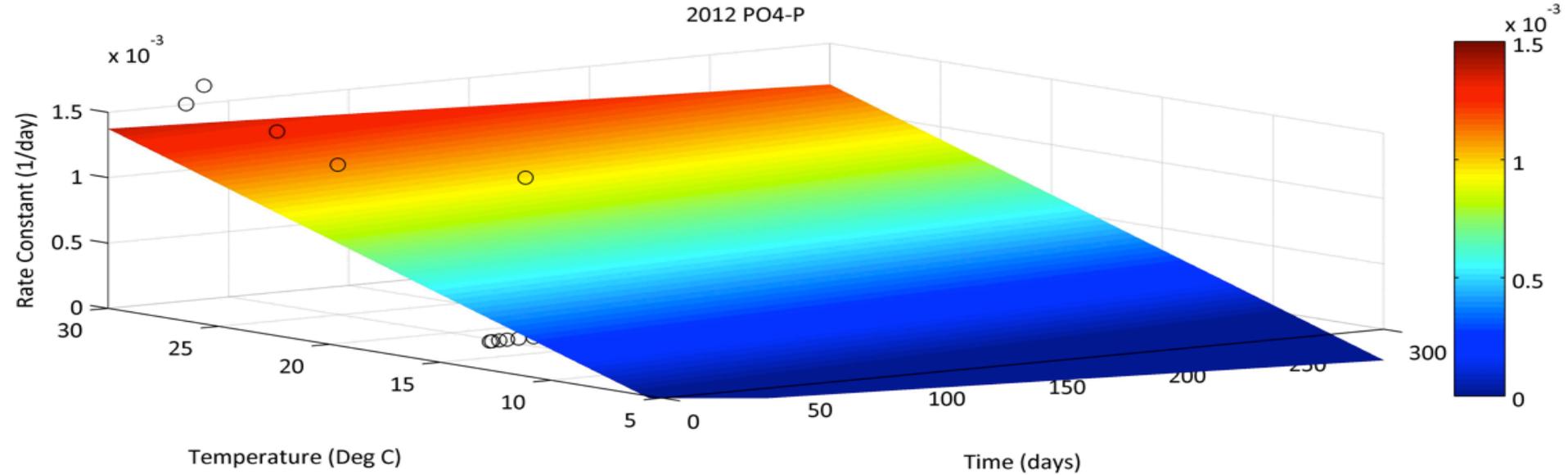
# Osmocote Bucket Tests: PO<sub>4</sub>-P



# NO<sub>3</sub>-N Regression

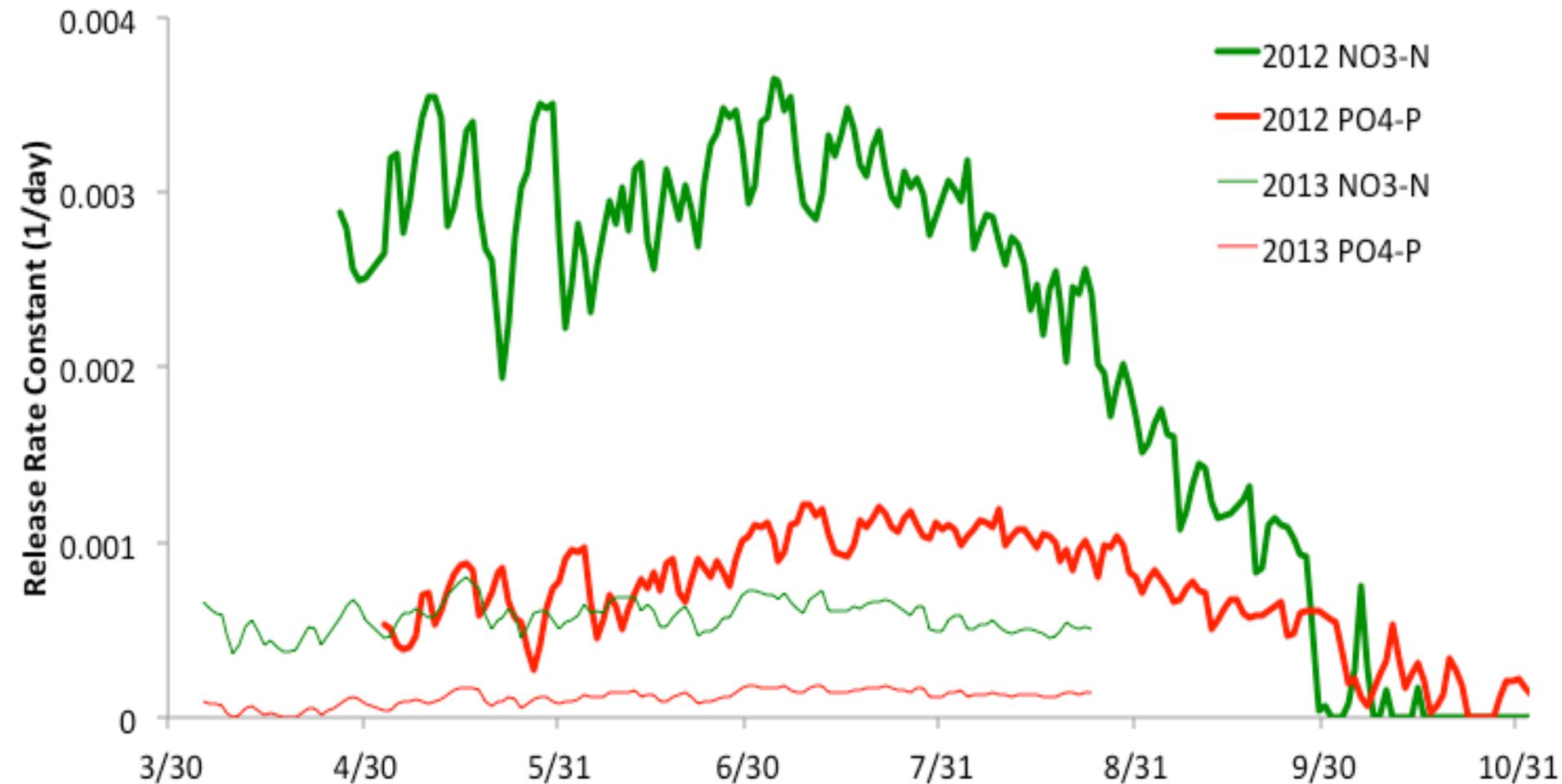


# PO<sub>4</sub>-P Regression



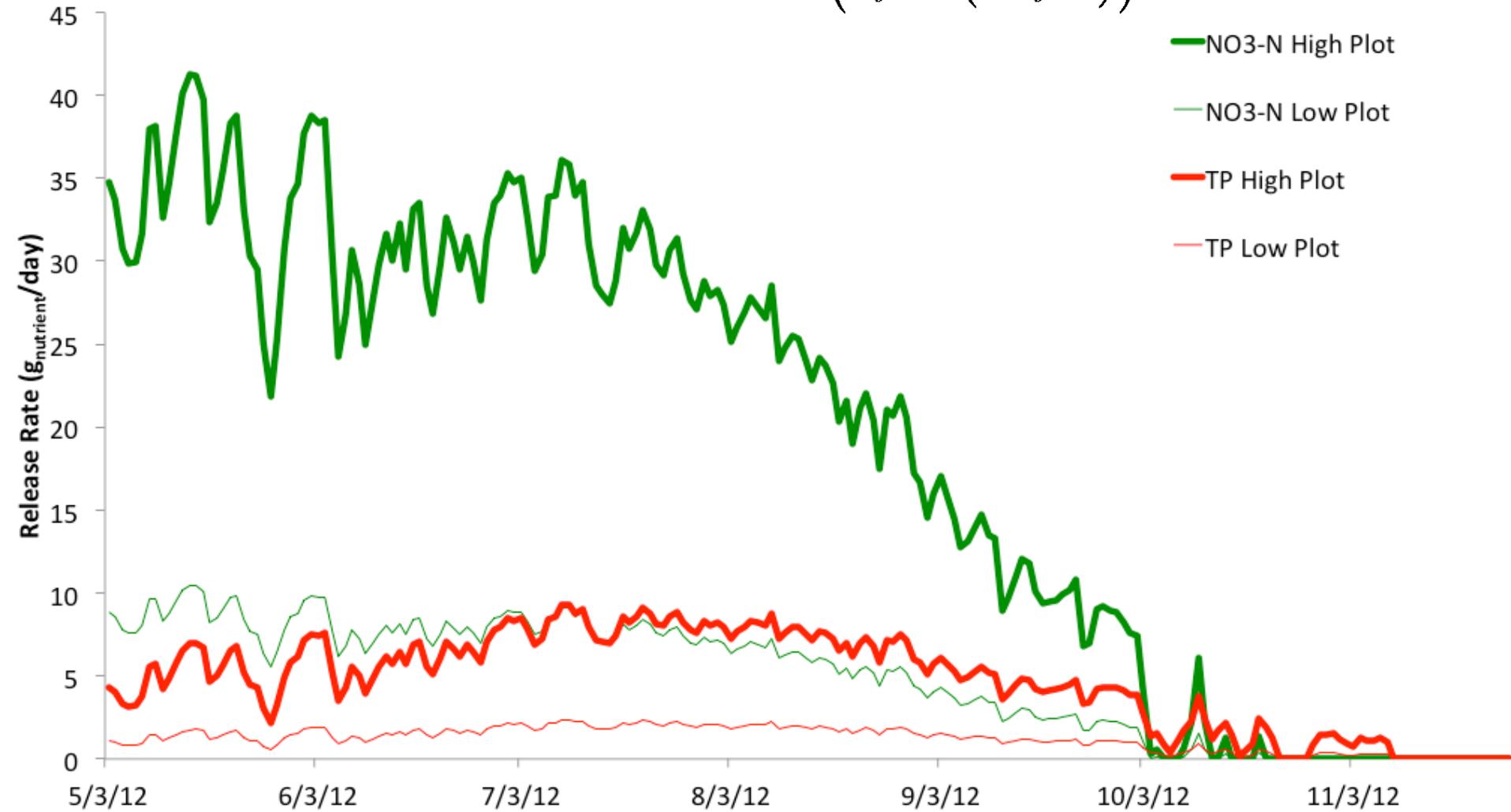
# Willard Spur Release Rate Constants

## Daily Release Rate Constants



# 2012 Release Rates

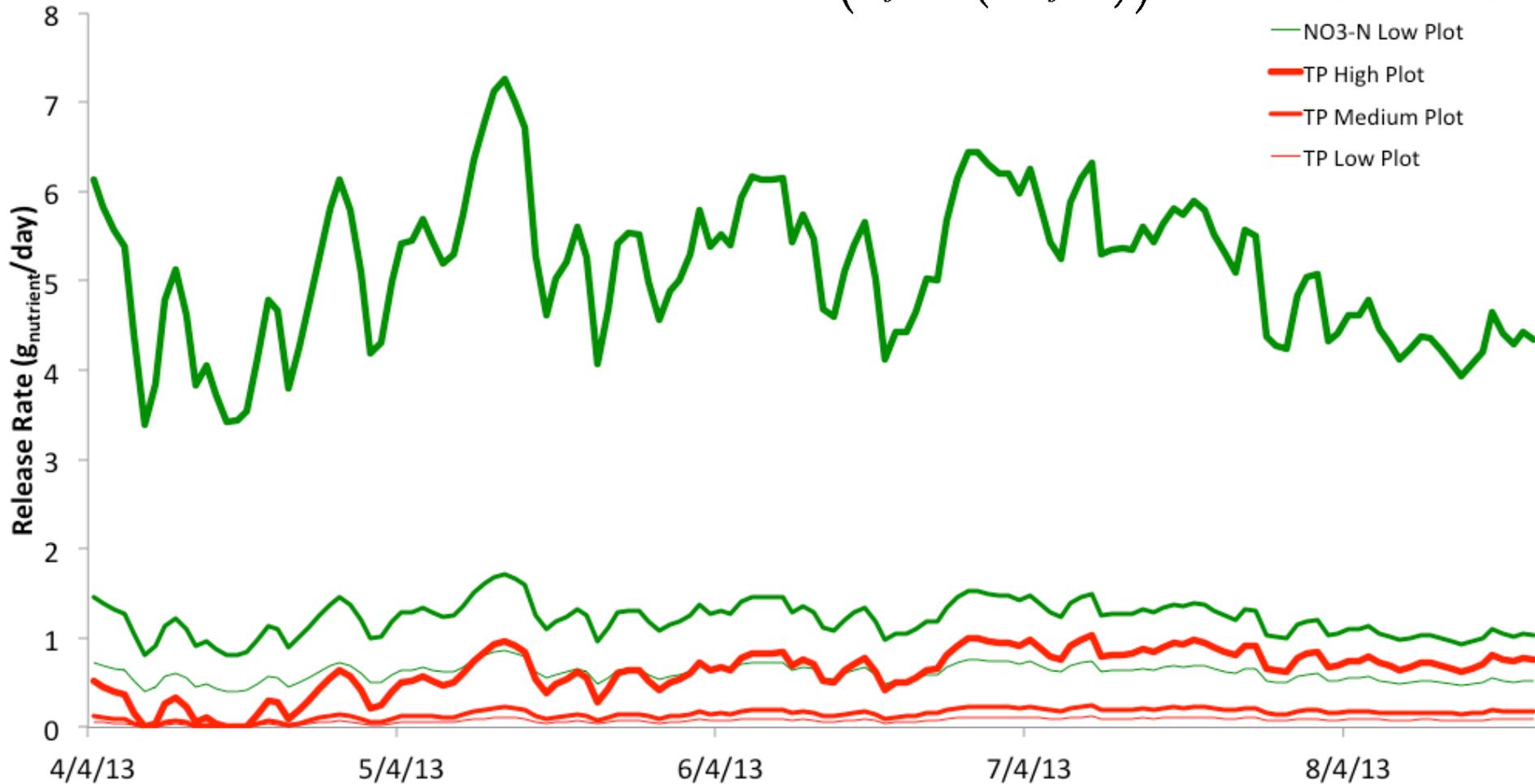
$$R_{nutr} = k_{release} \left( f_{fert}^{nutr} \left( M_{fert} \right) \right)$$



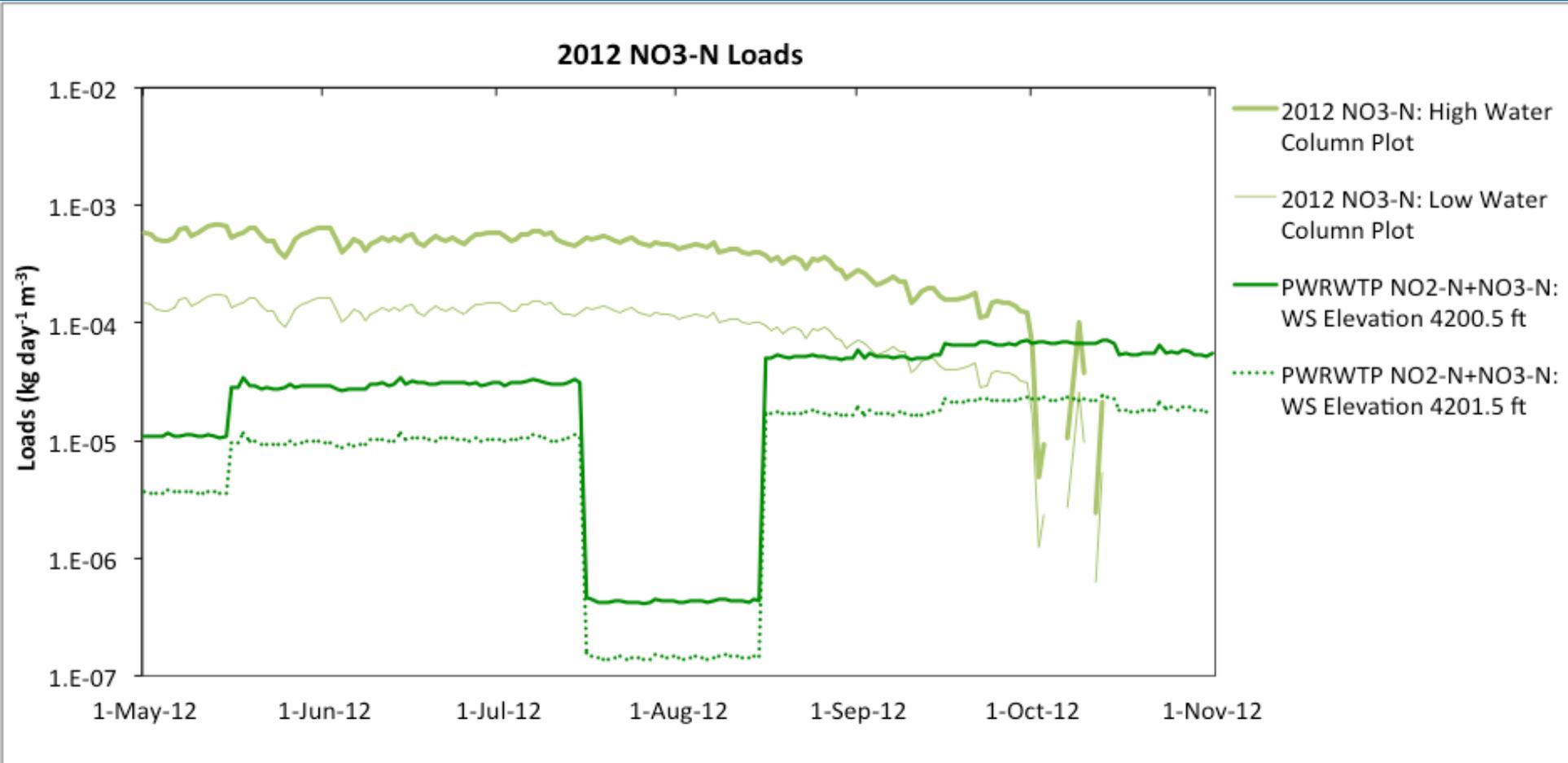
# 2013 Release Rates

$$R_{nutr} = k_{release} \left( f_{fert}^{nutr} \left( M_{fert} \right) \right)$$

- NO3-N High Plot
- NO3-N Medium Plot
- NO3-N Low Plot
- TP High Plot
- TP Medium Plot
- TP Low Plot



# NO<sub>3</sub>-N Loads



# TP Loads

