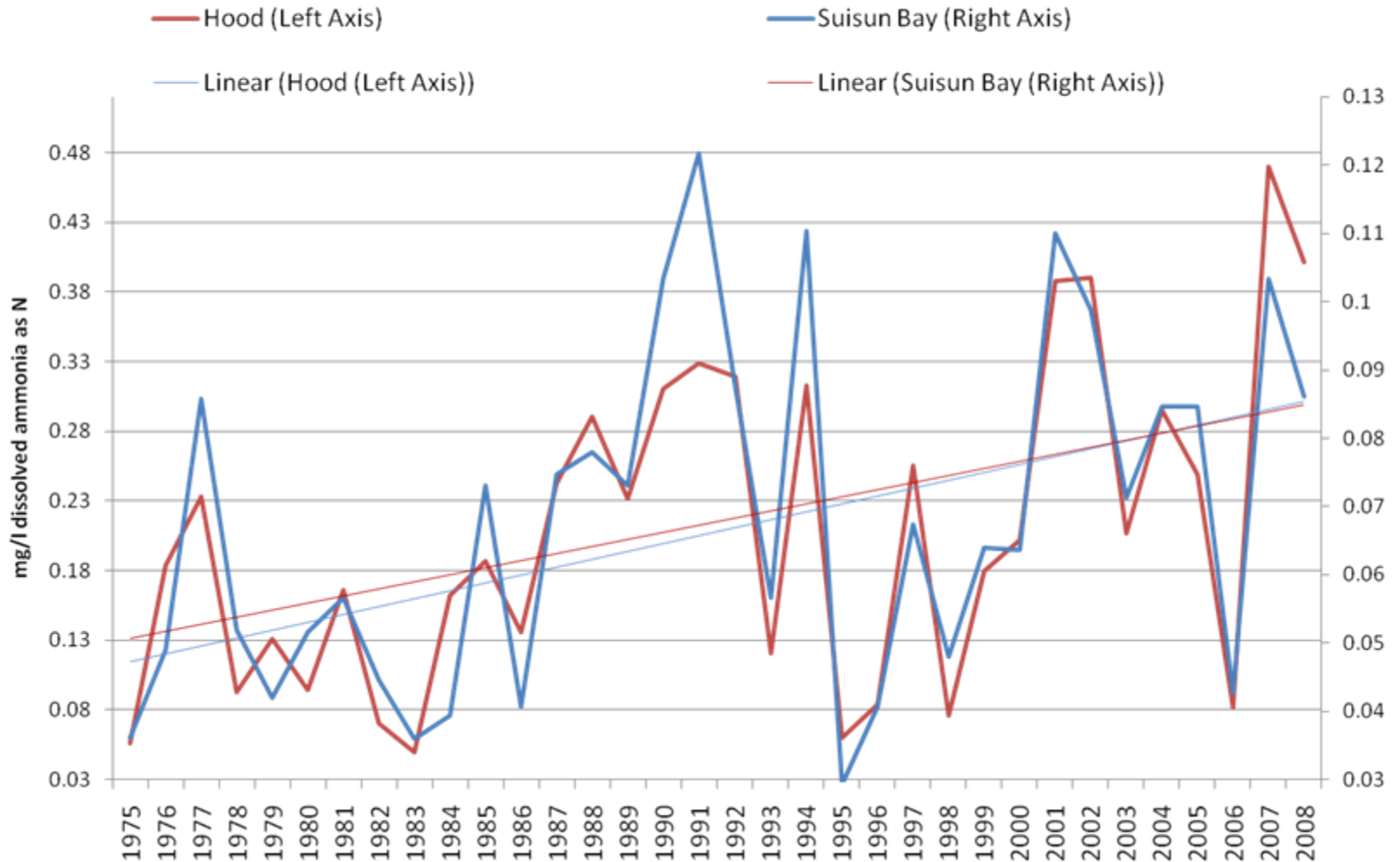


# Ammonia in the Bay-Delta Estuary

David Fullerton

March 11, 2009

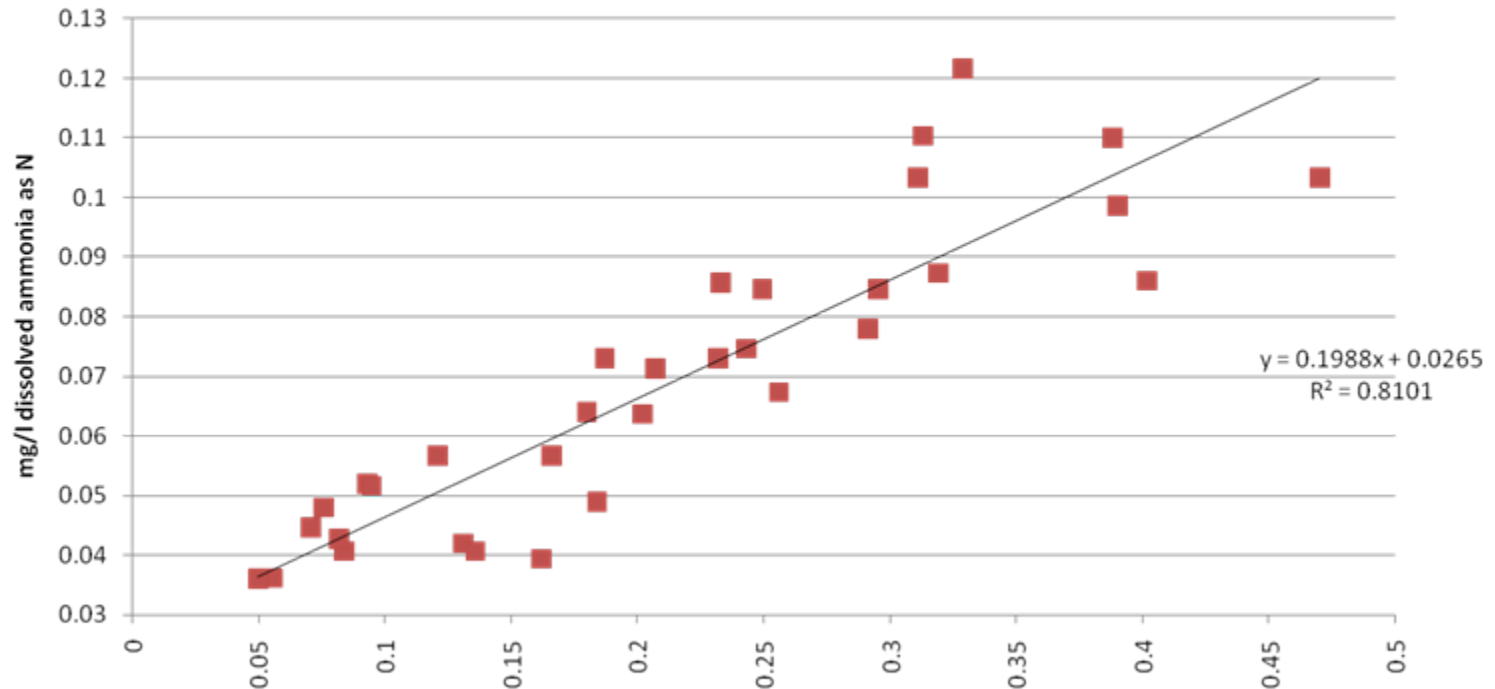
# Ammonium Concentrations at Hood and Suisun Bay 1975 - 2008 February to June



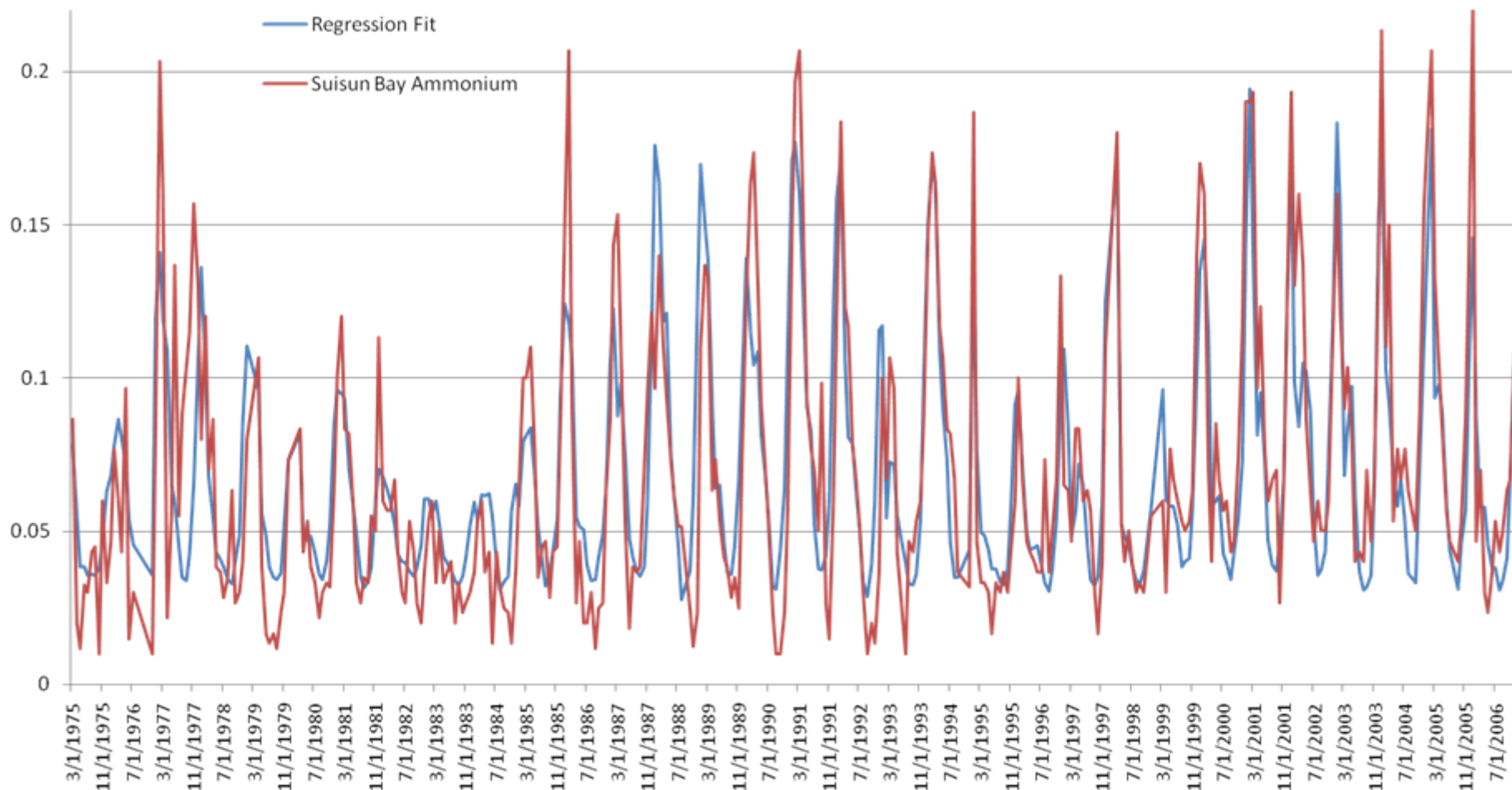
EMP Data

# Hood is Tightly Correlated to Locations Downstream

Suisun Bay/ Confluence v Hood Average Feb - June  
Ammonia Concentrations 1975 - 2008

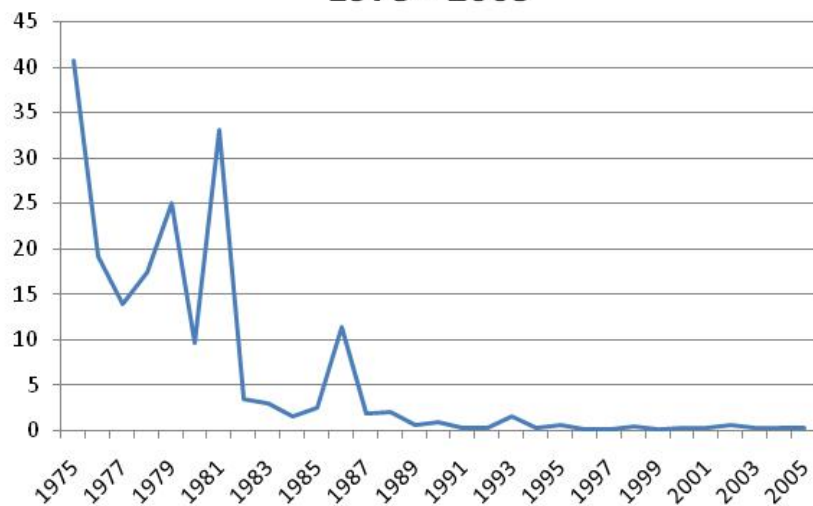


# Suisun Bay Ammonium (mg/l) v Regression with Hood and Water Temperature

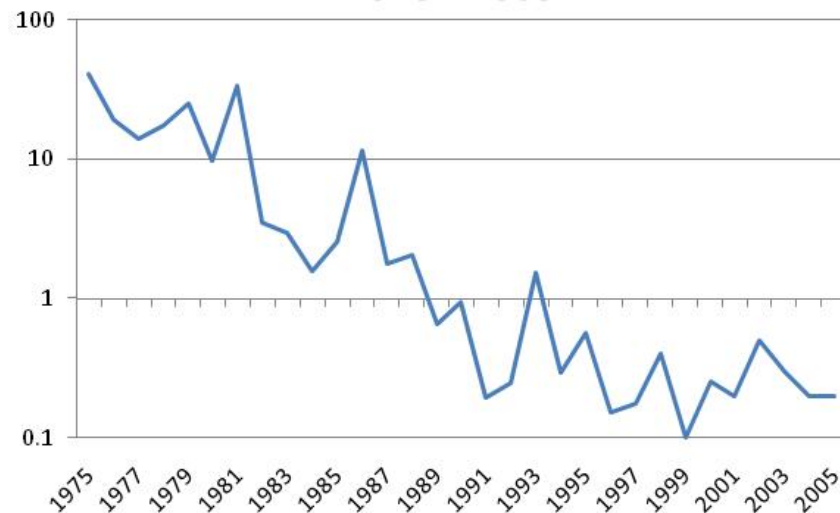


Suisun Bay Ammonium =  $.69 * \langle \text{Hood Ammonium current and last month} \rangle - .033 * \langle \text{Hood Ammonium current and last month} \rangle * \text{Martinez Water Temperature this month (Centigrade)}$

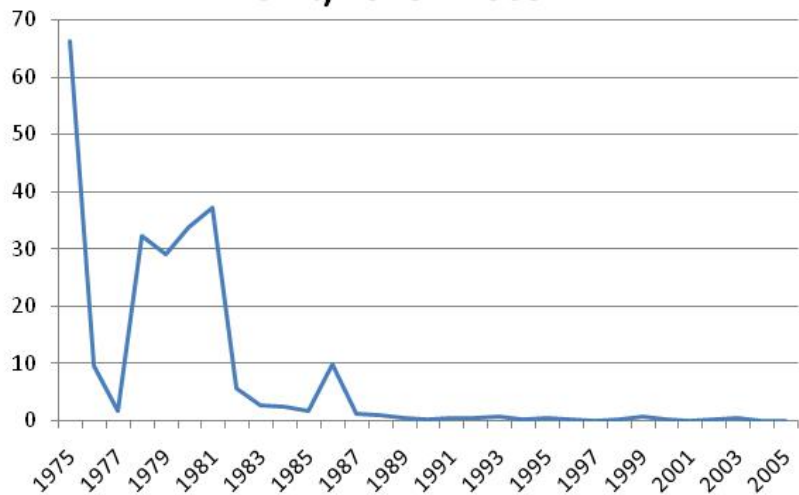
**Total May- September  
Bacillariophyceae at D4 (Confluence)  
1975 - 2005**



**Total May- September  
Bacillariophyceae at D4 (Confluence)  
1975 - 2005**



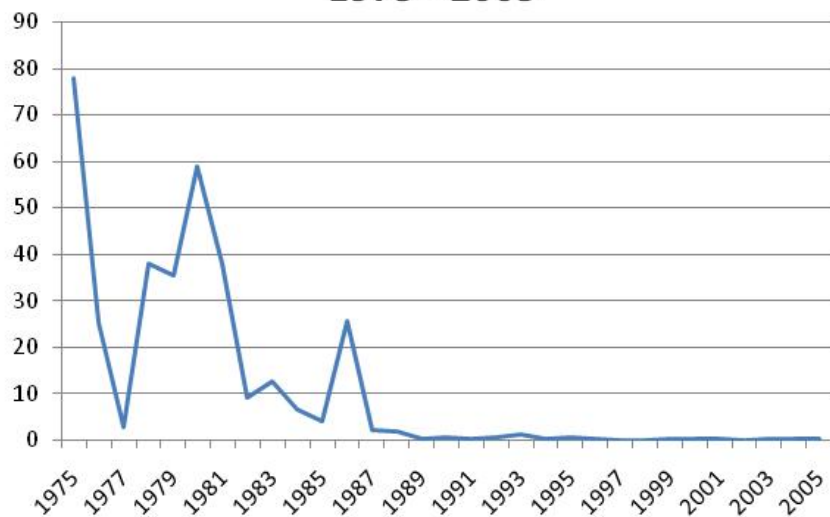
**Total May- September  
Bacillariophyceae at D10 (Middle  
Point) 1975 - 2005**



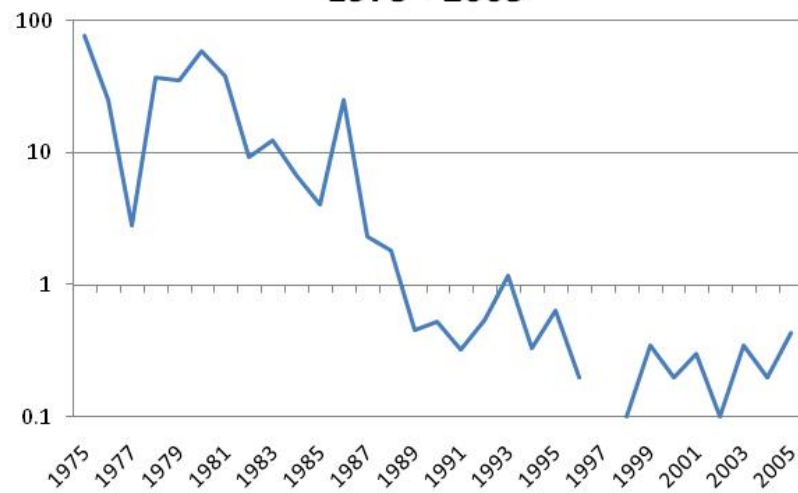
**Total May- September  
Bacillariophyceae at D10 (Middle  
Point) 1975 - 2005**

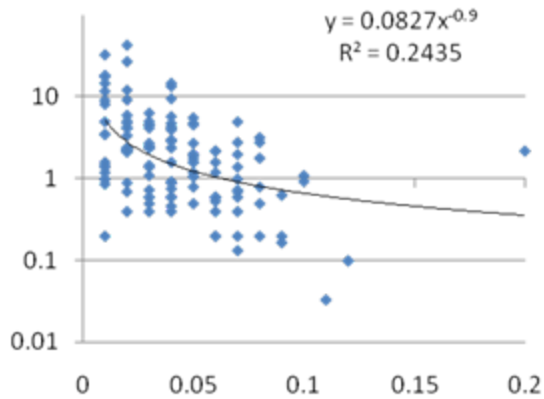


**Total May- September  
Bacillariophyceae at D7 (Grizzly Bay)  
1975 - 2005**

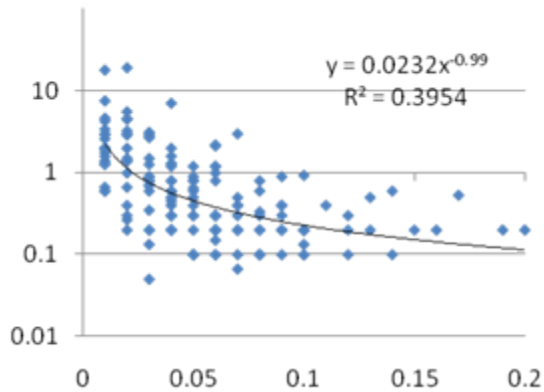


**Total May- September  
Bacillariophyceae at D7 (Grizzly Bay)  
1975 - 2005**

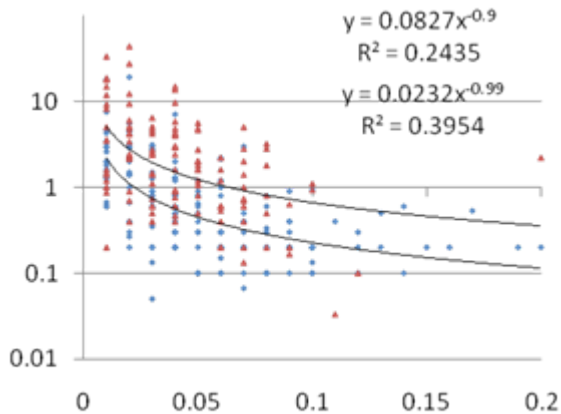




Diatom densities versus ammonium levels 1975 - 1986 in the confluence area



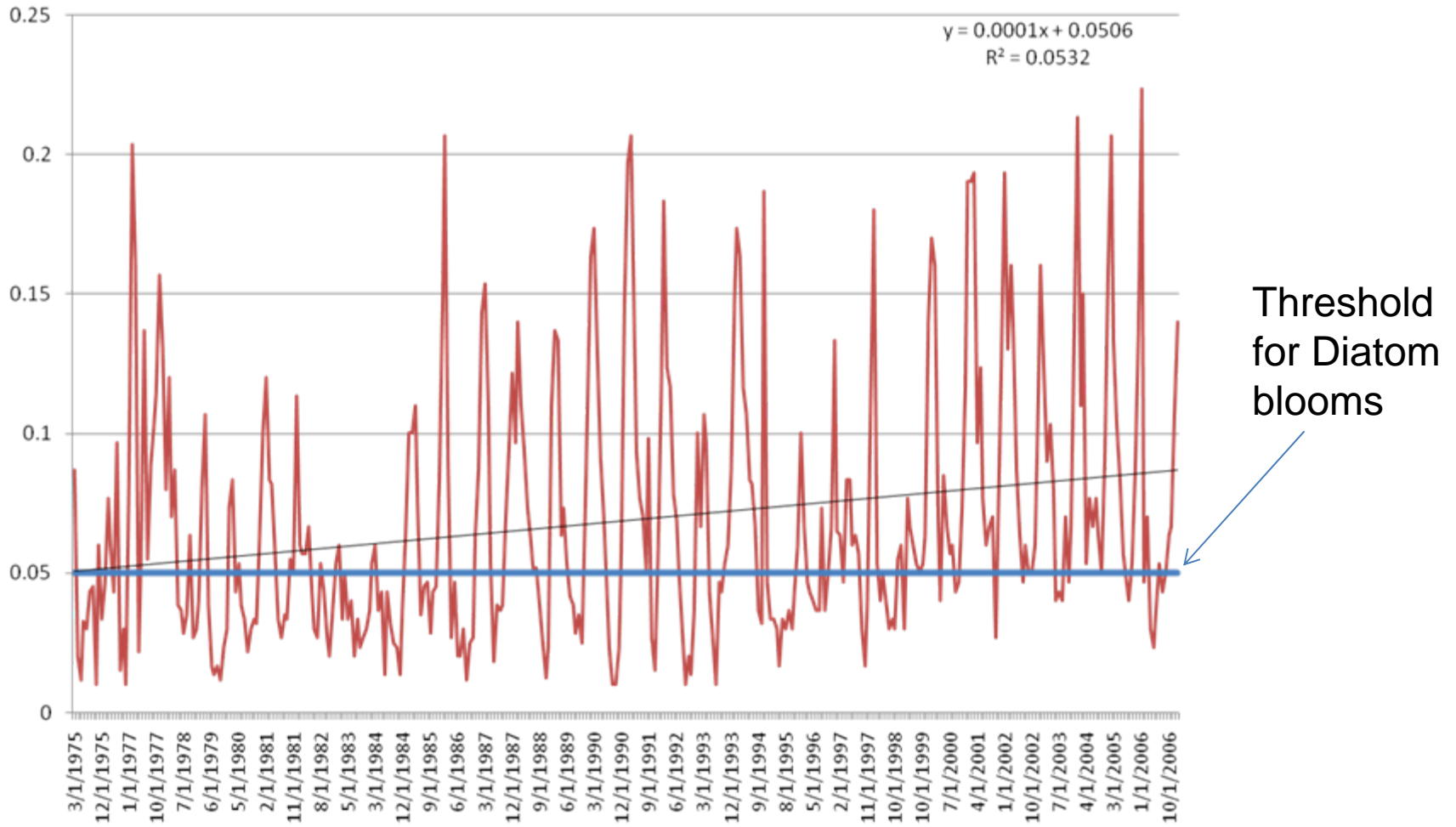
Diatom densities versus ammonium levels 1986 - 2006 in the confluence area



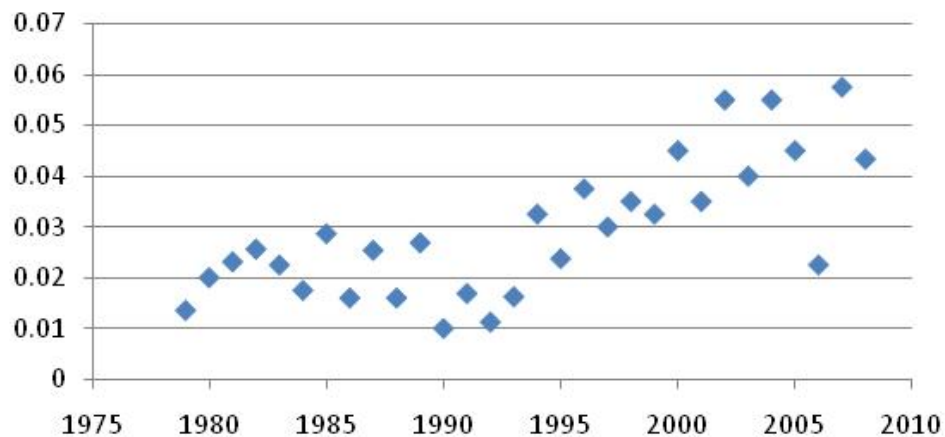
Pre and Post 1987. Diatom densities are down, but diatoms still correlated to low ammonium



# Suisun Bay Ammonium (mg/l) 1979- 2006



**Minimum Monthly Ammonium Concentration  
(mg/l) from Confluence to SS Bay**



**Median Monthly Ammonium Concentration  
(mg/l) from Confluence to SS Bay**

